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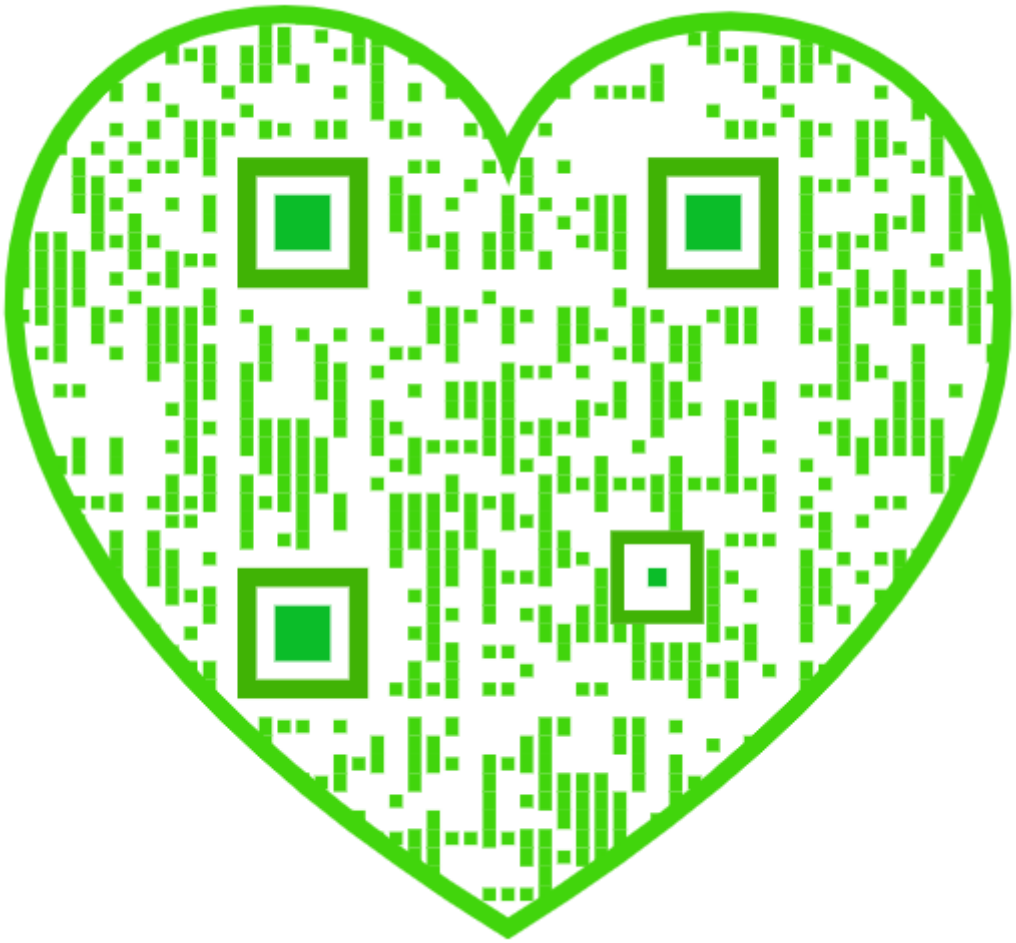

THE

DRESS AND CLOAK CUTTER.

A TREATISE ON THE

THEORY AND PRACTICE

OF CUTTING

DRESSES AND OVERGARMENTS

FOR LADIES.

ESPECIALLY DESIGNED AND ADAPTED

FOR TAILORS' USE.

BY

CHARLES HECKLINGER.

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BURLINGTON, VT.:
1881.

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PREFACE.

It is believed that the manner herein adopted of treating the Theory and Practice of the cutting of dresses is in a great measure new.

But few works of any value have been published on dress-cutting, and most of those consist merely of a few practical rules, without reference to any theoretical basis, and the author is not aware that the attempt to base the whole practice of the modern art on a sure fundamental principle, namely, the combination of a good construction as produced by a correct measure, has ever been attained.

It has often been urged that the cutter must apply the measure in connection with his draft; but this has usually been only given as an incidental maxim of practice; it has never been treated as the main principle of work from which success springs.

The nearest approach to this attempt, the author has met with, is in a little French work. This author makes the true principle consist in this, what he propounds as the novel method of combining the hight of the individual with his size around. But as he was unable, only in an approximate way, to perfect a collection of hights as a necessary means of carrying this combination principle into practice, he was obliged to form but an imperfect system, and therefore his work does not conform to true scientific knowledge.

The varied experience of the author leads him to believe that an exposition of the fundamental theory of construction will not only be satisfactory to accomplished cutters, by making clearer to them the principle he already acts upon, but will be found of still greater advantage in teaching those of limited experience.

The young student is often repelled from acquiring a scientific system, by thinking it complicated and difficult. Nothing can be more erroneous than such an idea: if learnt on proper principles it soon ceases to be difficult, and becomes an attractive study, and to attain moderate proficiency in it, is much easier than is usually supposed. But there are many cutters of more experience who are still much in the dark as to the true merits of the scientific principles and system, and it is desirable to impress on this large class how greatly the benefits to them would be increased if they would, by a little study, learn to cut and design in a more rational and systematic manner.

In the ever increasing competition in all branches of industry, the designing of Ladies' dress, also, has risen higher in the last years, to a standpoint more in conformity with the rules of art.

Unfortunately, the mass of dress-makers have not kept up with this progress, and many have not acquired these progressive principles. Many of them yet pursue the old taught system of superficial measuring, and teach cutting after the few uncertain patterns of ancient date.

Yet, sometimes they boast, with ostentation, to teach cutting thoroughly in a few days by a few rules, as if the structure of the body could be judged only by a measure of length or width? Endowed with superficial ideas and some paper cut patterns in their possession, they dismiss their scholars, even those who require practical skill to earn their bread as dress-makers.

To place before the dress-makers a change in this slovenly manner of work, the author undertakes to transfer the same principles in use among skilled artistic tailors, and to adapt it to the use of designing a garment for women.

Himself a practical tailor of a large and varied practice, he has endeavored, with the co-operation of many friends in the same line, to bring the art of dress-cutting to the standard of an exact science, and to make this science a common benefit to the whole mass of dress-makers.

Having been for years active in the literature of the clothing branch, he hopes to succeed fully in becoming intelligible in the necessary way of representation. The practical rules and directions given in the work, are all deduced strictly from our formed theory, are identical with those sanctioned by the best modern authorities, and adopted by the best modern cutters.

THE AUTHOR.

INTRODUCTION.

Dress-making is, without question, one of an artistic profession, and while it demands technical skill in putting together, it besides involves so much artistic taste as to call for the greatest mental energies and highest judgment of those engaged in it.

The artistic character of dresses call into action the best powers of the mind, in its intelligent study and practice. To investigate thoroughly its fundamental principles, we must bring to bear upon it, as we shall by and by have occasion to explain, reasoning of a high order. The observation must be keen, a considerable power of drawing inferences, and of tracing appearances to their causes, must be brought into use; and we must exercise judgment and taste, ingenuity of contrivance, and such a general course of thought and action as must, if it is to be successful, be dictated by competent and well trained mental powers.

The style changes continually; we may make hundreds of dresses, and yet no two similar ones may be called for. Each new one will possess some novel feature, offering special interest of the most diversified kind; sometimes it is the novelty of the goods, or the style, the demands of the customer, etc., give unbounded scope for artistic manipulation. Considering the great increasing demand for fine dress making, it is really astonishing to find how few take the pains to do it well. It has been remarked in our hearing, by one of the largest manufacturers, that good cutters are seldom to be met with—fine ones scarcely. And yet how amply it repays a little trouble devoted to its acquirement.

How then is this deficiency to be accounted for? Simply because it has never been admitted that dress cutting, like other branches of artistic knowledge, requires study. It is commonly supposed that after acquiring the simple construction of a waist, practice alone will suffice to make a good cutter. This is a great mistake, as experience abundantly shows. We continually meet with cutters who have practiced the greater part of their lives, and yet who, though they may be steadily occupied, work by such a crude system, to that sanctioned by experts in the art, as scarcely to be fit to be mentioned beside them.

We have already alluded to the wonderful variety of cutting and mode of construction. It is with this latter element that we have now more especially to do.

Although the construction of the draft is so simple that it might be learned in a few minutes, yet such is the scope that it gives for individual skill, that even with the same method it can be worked in a number of different ways, according to what the cutters notion of good cutting might be.

Now it is a natural inquiry, whether among so various modes and notions, differing so much from each other, there is not one in particular which may be identified and defined as superior to all others, and which consequently ought to be preferred for study? If so, what is it? What is the Theory on which it is based? And on what grounds does its superiority rest?

It is the object of the present work to endeavor to answer these questions: In the first place, is there any particular mode of constructing, which is so distinct and so superior to all others as to merit being distinguished as the best system?

This will commonly be denied, particularly by indifferent cutters, who will argue that opinions vary, that they think their own system as good as any, and so on. If they consider Dress Cutting merely a thing of chance, and one way as good as another, we have nothing to say to them, except that a good set of patterns would be better adapted to their capacity. But there are others more worthy of attention, who object to rules and system whatever, declaring that the draft ought to be by some such method as a chart which produces an even and regular pattern, and the cutters judgment alone, and their objection to systems is usually backed by the assertion that cutting by system is often unsuccessful.

The fact is, like almost everything else that may be done in different ways, there is a best way of cutting, and although a wide latitude may always be left for individual judgment and skill, yet the existence of a system of work preferable to all others, is sufficiently proved by its acknowledgement by all the best cutters, in a tolerably near agreement among them all, as to what this system is.

This system, as we have already said, essentially requires to be learnt and studied. It has been the result of long experience, and careful and intricate deduction, and it is scarcely possible for any one individual to arrive at the knowledge of it by his own practice or his own judgment, however shrewd, and he must be taught it, as students in other scientific branches are.

As no attempt has ever been made to work out and to explain the fundamental theory of construction, and believing that the thorough understanding of this is the best possible preparation for using the system aright, and for acquiring an intelligent style of cutting, we propose to state the theory fully, and show how it becomes developed in the shape of practical construction.

DEVELOPMENT OF THE THEORY.

In order that we may acquire the following illustrated problems, with the best hope of success, let us consider it as simplified by certain arbitrary limitations.

It may, in the first place, be asserted that by previous observation and experience, we may and commonly do arrive at some conclusion which enables us, with more or less confidence, to select from among the evidence some proof for holding to a certain opinion.

For example, we know that the proportionate size of a figure measuring say 34 breast, is invariably found in most points of relative ratio. This has been proved both by measuring the form and the deductions from the difference of build, with as much completeness as anything can be proved by these means.

If it is admitted that the figure is governed by a law of proportion, the invariable sequence of a certain size, then it is equally true that most all the sizes will correspond with its basis of measurement; namely, the "Breast Measure".

Granting the principle of the uniformity, what probability is there that in most cases the same proportion may exist?

It is evident, unless this probability exist in a high degree, amounting almost to practical certainty, that either the confidence with which we regard this law of proportion is greatly exagerated, or some one consideration which may exist in the uniformity of the figure has been omitted.

In all cases of induction, we can do no more than prove a certain law to be probable.

If our observation and experience be numerous and successful, the probability proved may be a high one, if few they may be slight.

Now it can hardly be doubted that we are correct in saying that by experience and subsequent induction we can arrive at nothing better than probability, and it is hardly worth while to enter into any study about how important a part this probability may exert.

And it is still more open to question whether a legitimate application of simple proportion, will permit us to hold belief with anything like that certainty, as many

attach to it, even granting all the premises which they are in the habit of claiming.

Let us, in order to see the difference, turn to the basis of the modern method, which lies in the relation existing between the proportions of the body and its measure.

It is a fundamental feature of the construction of this method, that these two, the proportion and the measure, are intended to act, not singly and independently, but in combination. And it is the full recognition of the fact, carried into all the ramifications of the drafts and designs, which characterizes the modern system, and give it its superiority over all others.

This is as yet but imperfectly appreciated by cutters who ignore this relation of the proportion and the measures; who rely mainly on a combination of lines and curves intended to give a draft of good proportion. Others will go further, giving some degree of consideration to the measures in rectifying the draft, but still making the proportionate standard the chief object.

The "Modern Theory," however, goes much farther. It carries the combined interest of the two to the fullest extent. It forbids consideration of one apart from the other, but commands treatment of both in strict conjunction—*in fact, to construct a proportionate draft by the measure.* For this object we establish certain natural lines on the body, which we need in the construction, and by which we are informed of the position, and the measures are taken to produce the size, and thus we obtain certain points by which our judgment is directed to the best advantage.

This principle of the combination of a proportionate basis and the measures is self evident, and none can doubt the resulting advantage. There are, however, two objections sometimes brought against it, which deserve brief notice.

First, it is said that "correctly proportioned garments, perfect in shape, handsome in outline, intended to fit only perfect forms, are regarded on general principles to give more satisfaction, and appear superior on an ill shaped form, and that using actual measures may lead one to sacrifice to a great extent the proportionate appearance."

This objection is merely founded on misapprehension as to how the principle is applied, for a study of the resulting system will show that it is fully calculated to realize any advantage the proportionate basis may possess, while whatever changes may be required according to measure, are only those where the draft is indubitably bettered thereby.

Then, secondly, it is objected that even with the measure, we do not always produce a correct fit—one which cannot be improved by trying on. But this involves a confusion in reasoning. For if indifferent cutters, whatever method used, the result would be equal; but if good practical workers, the additional help will give the advantage to those using the new method.

The fact is, however, that the general adoption of the principle should by no means supersede the exercise of judgment in its application.

The individual qualifications of the cutter will discriminate in cases where it may be proper to adhere to the proportionate method or not. Such cases may be of constant occurrence, but they do not affect the general advantage of the modern theory, which is sufficiently established on a sound basis, as the result of long experience.

Accepting, therefore, this system as the preferable one, we are able to enunciate the fundamental theory of the modern system, which is:—

That the proportionate build and measures shall be used combined; and that, in order to carry out most effectually this principle of combination, we adopt the measures as the most correct means to get a proportionate construction.

THE MEASURES.

By Practical and Scientific Principles.

We now proceed to explain the measures—how to take them, and why such as are taken are practicable.

The measuring by the modern basis has for its object not only to obtain the length, or to locate the main points of the draft, but the measure aught to, at the same time, give us a comprehensive idea of the build and position of the figure.

By the relation of the back and front lengths as taken, we are at once informed if the figure is proportionate, erect or stooping, and this in connection with the blade measure, and the width of back, demonstrates to a certainty, and with no cavil of doubt, what the figure requires.

But as we take the measures we shall explain their value and relation to the draft.

The most important part, which we proceed to find is to locate two points from which to measure from and to. First, we find where the socket bone is at neck, and make a mark there with chalk. Then take the common square and lay it across the waist in such position that the long arm rest across the back, and the short arm over hips at side. Thus it must rest close down over the hip and held firmly and level at both back and hip.

While in this position we mark at back **C** and directly under arm at hip, as **F**, and at upper edge of the square at **C**, (see figure 1): now these two marks give the level of bottom of waist at two important places, and it is necessary that care should be exercised in getting them correct.

1 THE BACK LENGTH.

Illustrated by Figure 1.

Now we come to measuring, which is first the back; for this we apply the tape at socket bone, and measure down to the mark at waist, which will give the actual length of the back. If the waist should be required longer than the natural waist and according to style, we also take the length wanted without removing the tape.

Next we apply the measure at the waist mark, and take the length to floor for skirt. In this case we pay no attention to the style, but merely get the actual length from waist to floor; for should a short dress be wanted we can deduct in the right proportion, and also add for trail.

Fig. 2.

2 FRONT LENGTH.

ILLUSTRATED ON FIGURE 2.

Is taken from the same point at back, down in front of shoulder to **F** at bottom of waist at side, level with mark, and from front of arm straight down. This measure is of great use, and must be taken correct, not to close on such shoulders as sink in at collar bone. It should not be drawn in too close at arm, but about 1 inch in front. Giving as it does the position, we cannot be too careful in taking it; it should be taken rather easy.

3 WIDTH OF BACK.

From centre seam of back **E** between shoulders to arm **P**. This must be the actual size without regard to shape of dress measured over.

4 ARM-HOLE SIZE.

Close around arm-hole, but easy.

5 HIGHT UNDER ARM.

The best way to take this is to have a small square made, which having a short tape measure attached at inside corner can be applied under arm, and close in front.

This square also has another tape fastened on its upper edge within two inches of front, and hanging down, by which to measure the length under arm.

Place this square under the arm so that it adhere close, but not so firm as to compel the person measured to raise the shoulder.

Hold it at back of arm with the left hand, and at the same time take hold of the tape with the right hand, and measure down to the mark at waist at **F**.

Also let the person extend her arm straight downwards, and measure to wrist. for the length of sleeve, from **H** to **I**. (see figure 3.)

This measure of hight under arm gives a sure guide for showing if the arms, and therefore also the shoulders, are high up, or low down; as in the case of high shoulders, the measure will be longer than when low shoulders are the case, and in both cases the arm is located in different positions.

6 THE BLADE MEASURE.

ILLUSTRATED BY FIGURE 4.

While the square is in the same position, slip the tape backwards over the blade, taking notice that it is smooth, and measure to centre of back over the highest part of shoulder blade, and this must be taken close. This measure determines if the figure be full over blade or not. and in connection with front measure give us a clear idea of the figure, whether erect or stooping.

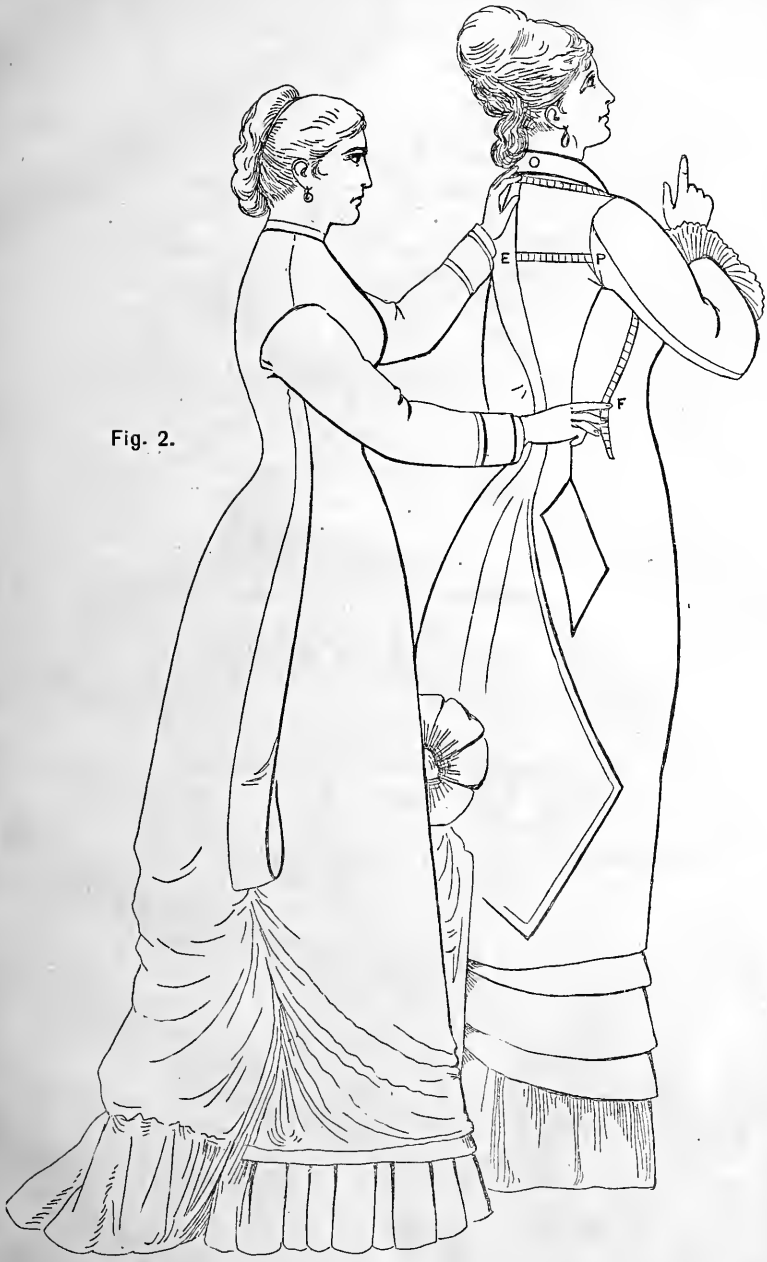


Fig. 2.

7 BUST MEASURE.

The square being yet in the same position, by slipping the tape round to front, that it be straight and no wrinkles under arm, take the distance to centre of body, over the highest part of bosom, as shown on figure 5, from **H** to **B**. Let this last be taken loose.

8 BREAST MEASURE.

This is taken close under arm, around the body, over the fullest part of bosom and blade, and must be taken medium close—be sure in taking it that the tape does not drop below the shoulder blade, or it would give to small a measure, and with the view of preventing such an occurrence, it is better to stand behind the customer in taking it.

It being the measure by which some important points on the construction draft are produced, it will be evident that it needs careful attention. (see fig. 3.)

9 THE WAIST.

This we take around the smallest part of the waist, where it is defined the sharpest, and it should be taken rather close.

It is well to become proficient in taking all these measures in a correct way. Apply the tape smooth and even, neither close nor loose.

10 THE HIP MEASURE.

FIGURE 3.

Over the highest part of hip and closely taken, for all garments now worn are close to body.

Fig. 3.

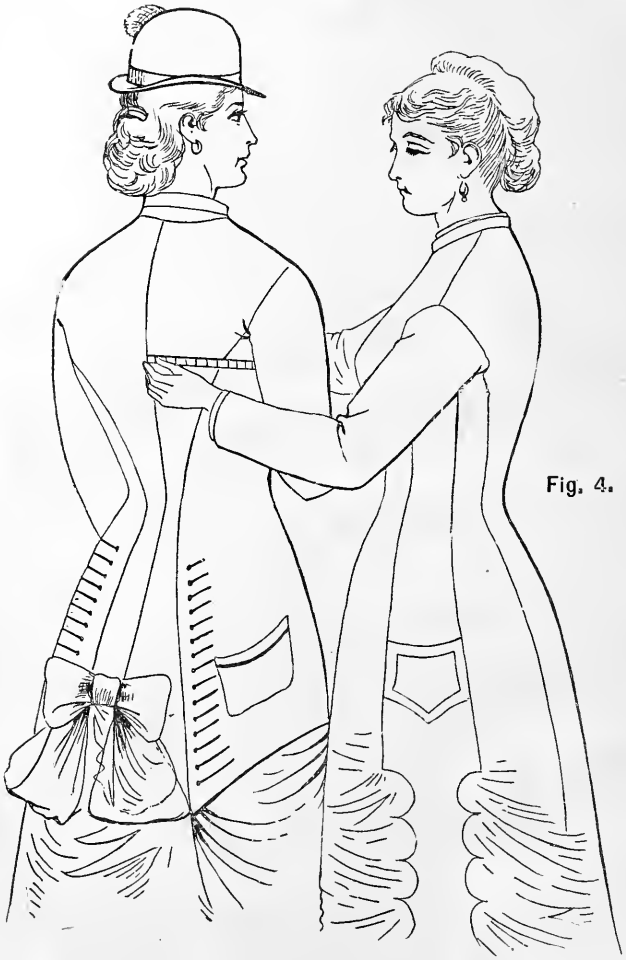


Fig. 4.

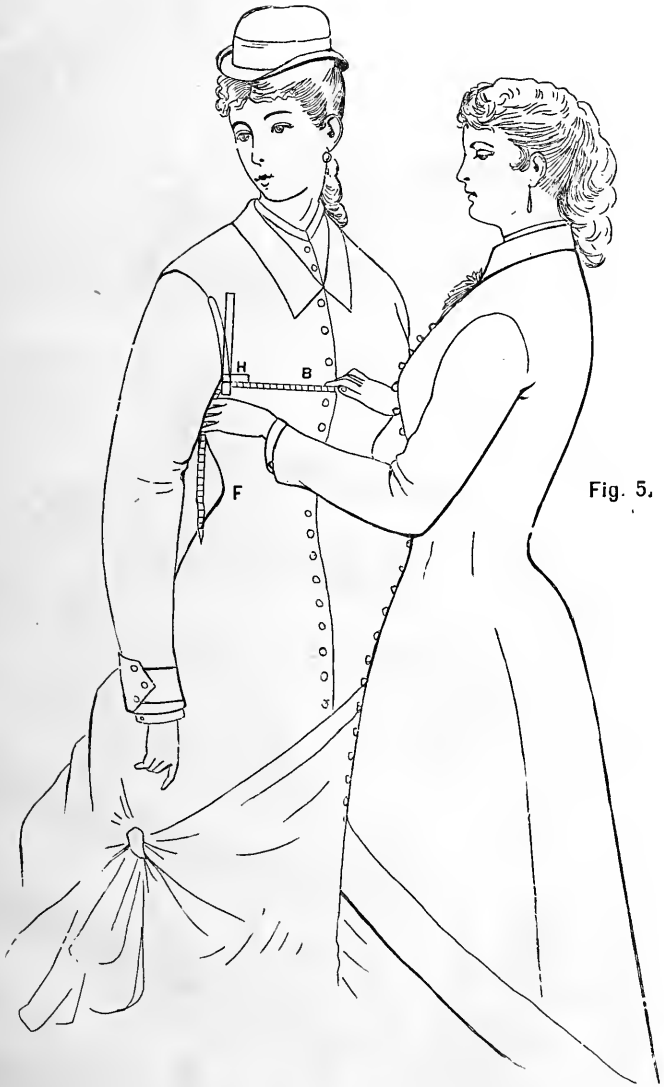


Fig. 5.

THE PRACTICAL DRAFTING OF BODY WAISTS.

By Measure as taken on the Body. Illustrated by Figs. 6, 7, 8 and 9.

We shall now begin to explain the system by which dress-waists are produced in conformity with the person measured; we shall try and make this clear by the use of diagrams illustrating every stage of drafting, and explain it so that none may go amiss.

In order that we may more intelligently proceed to work, we shall give a measure with which to draft this elementary pattern, and this measure being taken from a mass of such in our book, and one very nearly of good proportion, will be found as good an example to commence with as any.

The measure we shall use, is Breast 35, Waist 24, Back length $14\frac{1}{2}$, Width of back $6\frac{1}{4}$, Arm-hole 16, Length under arm 7, Front of arm or over blade $10\frac{1}{4}$, Front length $18\frac{1}{2}$. Now we first draw a line, about one inch from the edge of paper. It is always better, as it is easier to be drawn upon, to use pattern paper in order to produce the pattern, and far more economical than to draft it on the cloth, both in time and material.

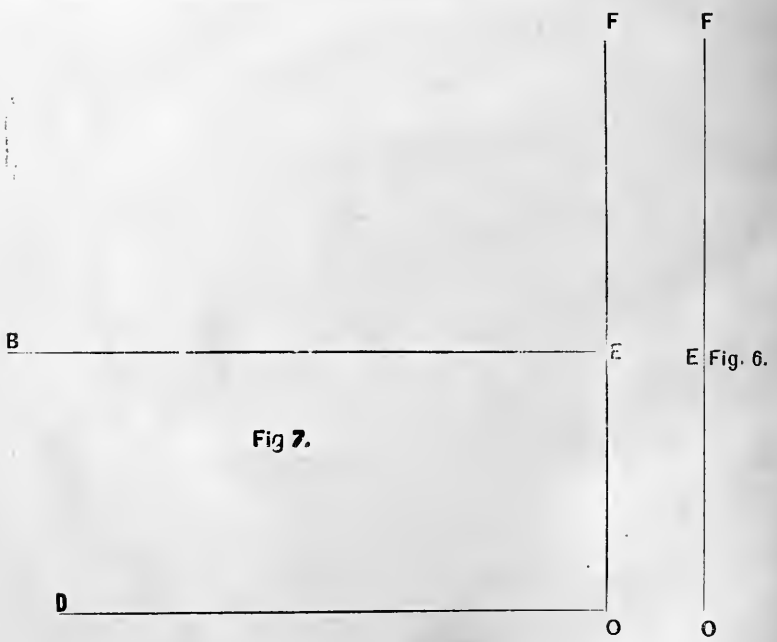


Fig 7.

Fig. 6.

Having drawn this line, as shown in figure 6, we make a point at its lower edge **O**, and at right angles with it draw another one to **D**. Next mark off from **O** upwards on front line, the distance measured for height under arm (5th measure) which is 7 inches, and dot **E**, (see figure 7). From **E** draw a line over to **B**, also at right angles with line **E O**. then measure from **E** over to **B** one-half of breast measure (35) equal 17½ inches; this one-half of breast measure is always sufficient for point **B** on all full grown forms and large persons, but when we draft for children or very indifferently developed forms, it is necessary to increase it ½ inch, this will make the draft easier for such form, and more nearly meeting the requirement of a slim build. Now place the tape at **B** and using point **E** as pivot, sweep down to **D**, where the sweep cut line **O D**, we make point **D**, (see figure 8.)

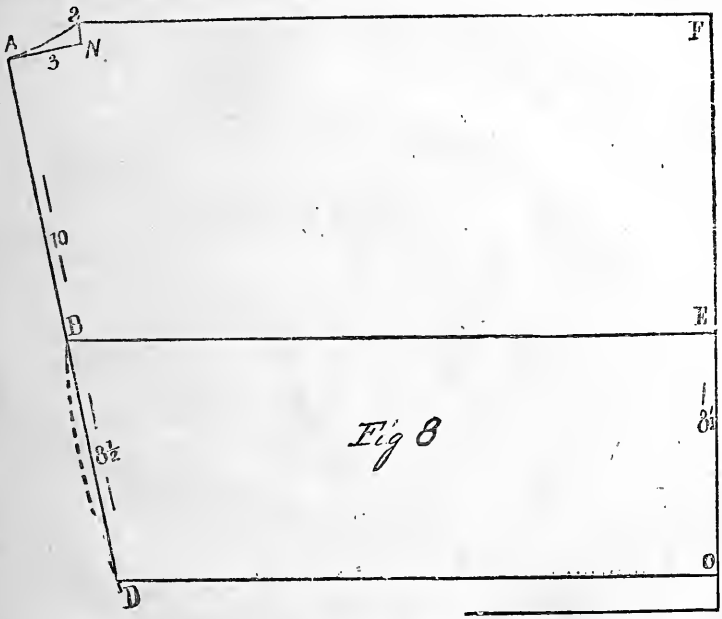
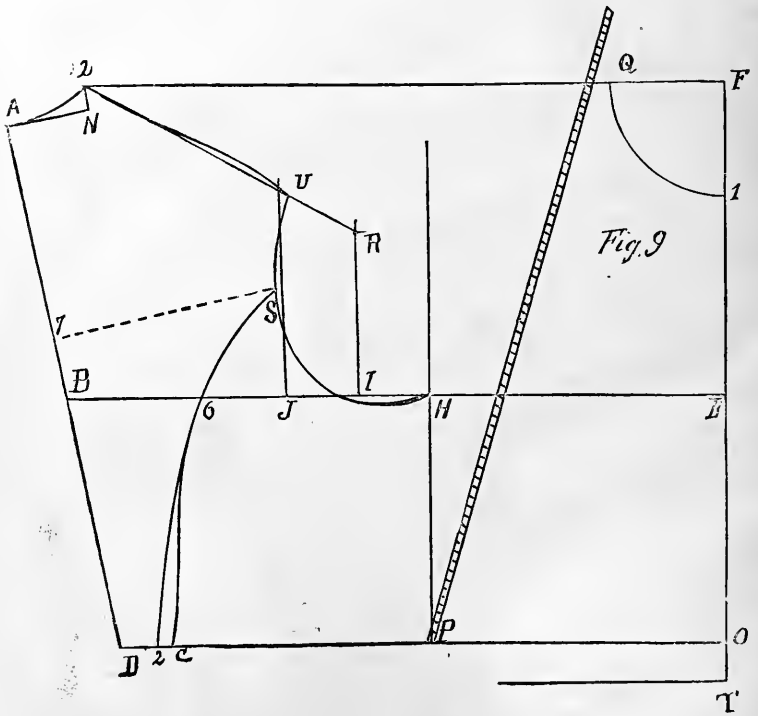


Fig 8

Next, place the straight edge on **D** and **B** and along it draw a line **D A**, which represents the centre of back. From **D** upwards measure the length of back (14¼ inches), and from **A** draw a line over to **N**, which latter is 2 inches over from **A**, then raise point 2 above **N** ½ inch and form the curve of back neck; again

place the square on the front edge in such a manner that when the long arm reaches over it may just be at the same height as point 2, figure 8. This gives both front and back of one height, or as we might say in good proportion; but should the front be higher or lower, it would demonstrate a more erect or stooping position, according as the deviation may be more or less.

Let us now turn to figure 9, for a further illustration of the manner of drafting. From **B** to **H** on line under arm place the length of blade measure, or as mostly called by name of "front of arm"; this measure is $10\frac{1}{4}$. From **B** also forward is placed the width of back to **J**. In the centre between the points **J** and **H** mark **I** and draw perpendicular lines up at the three points. Then from **I** upwards to **R** place one-quarter of the arm-hole measure (16) which is 4 inches, and from **R** to 2 on top of back draw a straight line.



The next step we will take, is to draw the back; first by curving the shoulder line above straight line ½ inch, near arm-hole, and curving back to line again near 2, and also from U form arm-hole towards S where it runs over the straight line, thence curving downwards and below I, ½ inch to H; we draw this line inside at S because by measuring from 7 we find the measure to reach less than to the line, generally ¼ inch. We make the back at bottom 1½ to 2 inches wide, and draw the side seam from thence to S.

As style has greatly to do with the shape of the back, we can here give only an average shape as an example. The seam however is changeable to any position, without affecting the fit of the waist in the least.

From 6 at blade form sidebody to within ½ inch of back 2, which gives C: now place the front measure from P up towards Q, deducting from it the width of back, and make a short sweep at Q. From line at F measure over to sweep at Q one-eighth of breast measure for proportionate build, 2¼ inches.

In practice we use mostly the neck measure, which in most cases is easier arrived at without taking it, for the majority of such sizes measure 15 inches. Should the neck appear slim, 14 comes nearer; if short and stout, 16 would answer better. This can easily be learned with a little practice in measuring. Yet for some garments it is essential to have the neck size in order to construct the waist close to measure. From F square with front draw a line, either above or below as the measure happens to give it, to intersect sweep at point Q. Then sweep from corner F by Q to 1, for neck. Measure from point U around the arm-hole past 3, 4 and H to 16, the size of arm, and fix a point at 16. (see fig. 10).

Take the width of back shoulder and place it from Q towards 16, and fix point, then curve front shoulder and finish, say by going out beyond 10 a suitable distance to make the arm-hole look a good shape, or about ¾ inch.

Form neck by dropping it ½ to ¾ inch to Y. Then from Y, which is ¼ inch inside of front line, curve out towards E ½ inch beyond the line, then going back over line, draw it inside ¼ inch to T. Measure from Q to T the front length, less width of back, and ½ inch below it draw a straight line as from T to 11. We can also take a measure down to bottom of waist at front, to get the correct length and apply it from Q to T.

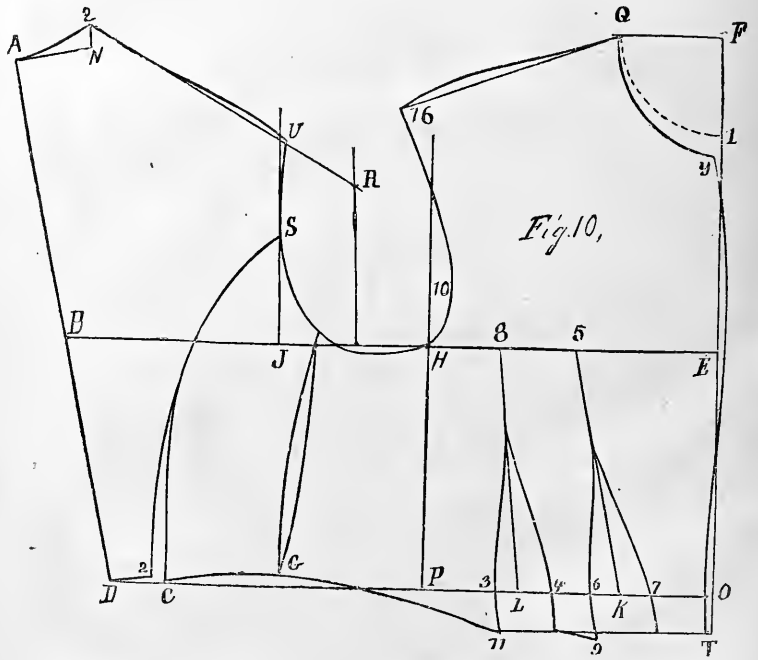
In the middle from E and H, mark a point 5—and also in the middle between 5 and H mark point 8.

Now we have come to the most difficult part of the dress—waist designing, which is placing the darts in their proper places.

We shall take a proportionate build, and place them accordingly. Later on we shall show under what conditions they require changing in position, yet the manner of getting their size is the same in all cases, suitable and in harmony with the measure.

We have a size of waist of 24 inches, one-half of which is 12. Now we find by measuring the line **D O**, that it is 15 inches, while it ought to be only 12, or one-half the waist measure. The size deducted from the length **D O**, gives the value to be taken out in one or more darts.

If, as in the case of many men, there were no taper to the waist, there would be no darts needed: but as in every case of female form, the difference between the size of breast and waist is considerable, then it becomes evident that this difference must be removed by darts, in order that the waist may set close.



As this difference between these two sizes determines the value of the darts, it is evident that the fuller the bosom, and smaller the waist, the larger will be the

darts; and in a contrary case, the flatter the breast, as compared to the waist, the smaller they are needed.

As we have already stated that the size of the waist should be 12 inches, which deducted from the length **D O** leaves 3 inches, these are taken out in 2 darts, each of a size of one-half of these 3 inches, or equal to 1½ inch each. Now where shall we place them? Divide the space between **P O** into 3 parts, which gives points **K** and **L**. From **5** draw a line to **K**. From **8** one to **L**.

Then place the size of darts equally on each side of line, that is ⅜ of an inch from **K** to **7** and **K** to **6**, also from **L** to **3** and **4**, and draw them like the diagram. They should not reach up over ⅔ of the distance from **K** to **5**. The one nearest arm-hole can be ½ inch higher. See also a following article about the height of darts in different builds.

Now it remains only to finish the waist line from **11** to **C**, running it ¼ above line at **G**. Also drop point **9** one-quarter below.

Then divide the side-body from about the centre between **J** and **I** to **G**, taking out ½ inch curve.

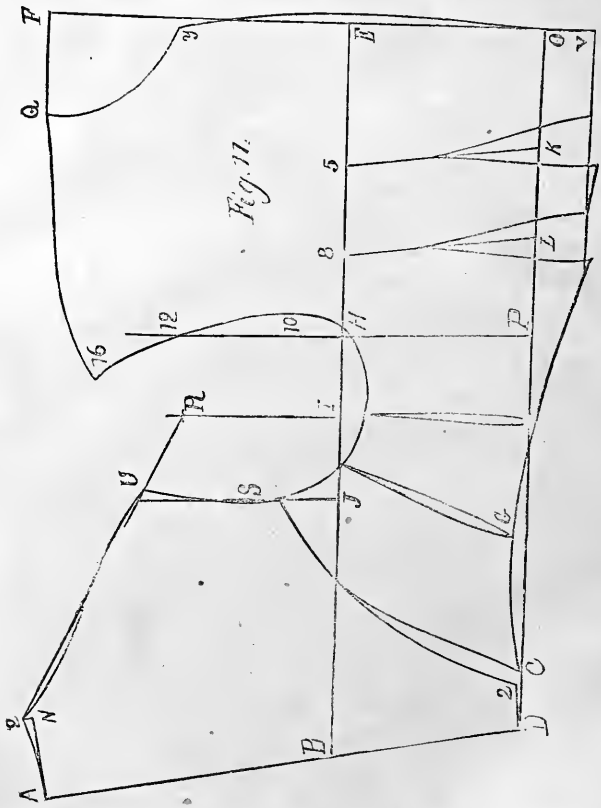
This concludes drafting the waist to measure; and as every size, whatever the measure, is produced identically the same, only deviating in so far as the measures may be of different sizes and lengths.

LARGE SIZE DRAFT.

FIG. 11.

The manner of drafting this, as well as all kinds of waist-patterns, being similar to those already explained, it seems quite unnecessary to go over any lengthy discussion.

We will only make clearer some few points in regard to drafts of large sizes.



The points being produced by measures, by the same process as used in drafting figures 8 and 10. But one point we must be careful about, which is never to cut the shoulder broad on such large sizes. In fact, it never is necessary to go over and outside of the line at U above S for width of shoulder.

And again, as the measure by which this draft was reduced is: Breast $42\frac{1}{2}$; waist 34; length of back 15; width of back $7\frac{1}{4}$; arm-hole 18; size over blade to front of arm $12\frac{1}{2}$; height under arm 6, and front length 20, we get a size corresponding to the increased measure. We find also that the distance of line **D O** being 20, and half the waist but 17, an excess of 3 inches to be taken out in darts at front.

Then again, the space between back and first dart being so great in large sizes, it will answer better to get a close, smooth fit, to put in two cuts, one at **G**, and one somewhat forward of **G** and between **G** and **P**. This will enable the waist to fit closer over and along the waist.

At one point all large sizes deviate from ordinary build, this is that point **P** should be lowered $\frac{1}{2}$ inch below line. This is caused by the erect position generally accompanied by large size. Then from this point as changed, we start our measure up to get the distance of **Q**, and fix it by the measure.

It is also well to take the length from top to bottom at front on these sizes, in order to better regulate the correct place it should be cut to.

In the matter of darts, in order that the form may appear to better advantage, it seems right to place the darts so that they reach well up. This will close up better on bosom—a form most necessary on this build.

Body-waist Lengthened Below Waist-line.

Fig. 12.

This diagram shows two different shapes at the bottom. These deviations of shapes are easily produced, and need no particular explanation.

But to lengthen the waist so that it will be of a size to correspond with the size of the hips, and to put the amount in the right place, is what we shall now make clear.

Clinging to our idea of thorough completeness in our work, before giving the way of extra increase of size of hips, which on all proportionate forms is generally 12 inches over waist, we shall find where this extra increase is met with. We will take the standard of waist proportion to be 12 inches less than hips, so that a waist of 24 inches would be accompanied with hips measuring 36. This would not always hold good, and some would say that a greater difference would be the general formation, but in the strictest proportionate figure, our figures would be right. Supposing then this difference to be 12 inches, there would be 6 inches on a side to be added.

This amount is not distributed all around, neither is it distributed alike in each individual, still the forms are so similar in a large number of cases, that a rule may be laid down which will suit a large majority of forms.

The rule is that the largest amount of increase is at the sides, that one-half of the increase is at 7, 8, 9 and 10, and one-fourth each at front and back.

Now figure 12 shows a draft for designing one of an increase in length. We there have 3 inches to be added on one side, and $1\frac{1}{2}$ inches at back and $1\frac{1}{2}$ at front.

From **O** to **B** we go out to hip down $\frac{1}{2}$ inch on back of seam, and the same amount of curve on the side seams. On the side body seams which join the back, we add $\frac{1}{2}$ inch for a good curve.

At front the line is run along the straight line as on the diagram, with scarcely any increase to speak of; but the darts are drawn down each seam, having a curve of $1\frac{1}{2}$ inch.

Now it remains only to add on the side-body seam. This will be, as we have a sum of 3 inches to dispose of, giving a strong outward curve of $1\frac{1}{2}$ inch.

When a great amount of increase is needed, it is always desirable to cut the side-body narrow, and make another cut farther forward, like **; J.** In this case

the amount of hip size can be divided between the two openings, giving 1½ for each. The bottom can be regulated to fancy or style.

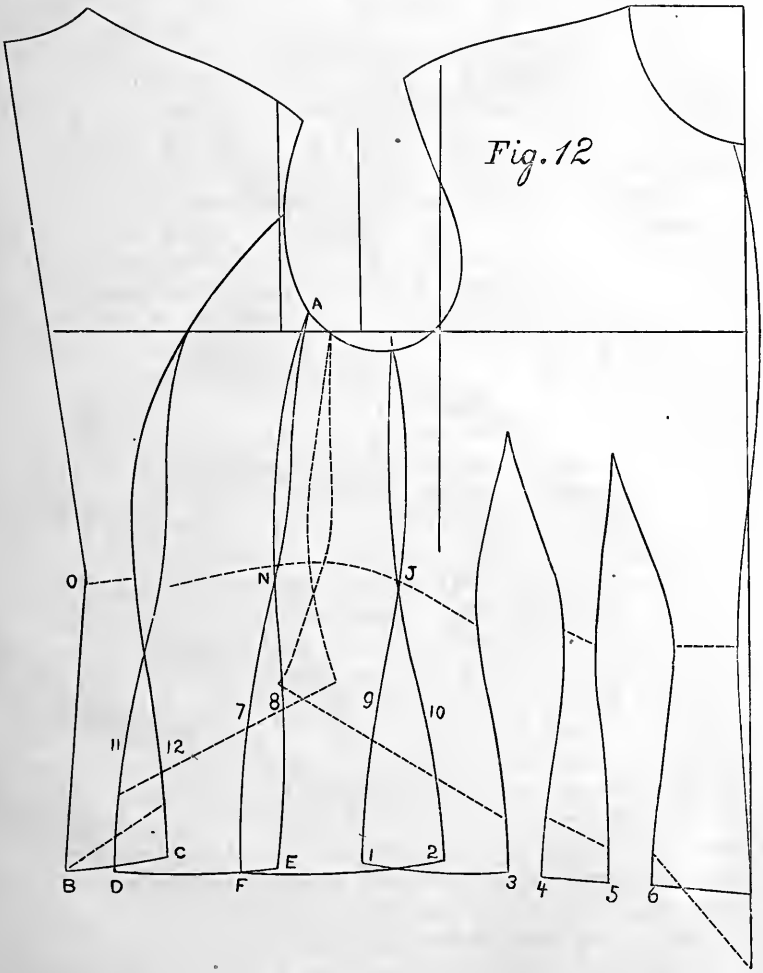


Fig. 12

THE PRINCESS STYLE DRESS.

After having drafted the dress-waist to measure, we cut it apart—that is separate the back side-body and front, and by those separate parts design the skirt for this garment.

The method here used ought to be carefully gone over and thoroughly learned, for every sack style garment is produced in the same way.

Lay the back pattern against a line at **O**, and away from this line at waist at **B**, 2 inches. (See fig. 15.) Then draw along the back pattern, and also from **B** to length at **C** a straight line. If the dress is made in a train skirt, this line requires to be lengthened as it is needed. The width at the bottom is made according to the requirements of a close or loose fitting garment, and may be an average of 12 inches.

From **E** to **D** draw a line, and on both seams curve somewhat out over hip.

The side-body (Fig. 14,) is laid also against a line, having its upper part on line at **A**, and **D** being $1\frac{1}{2}$ inch away from it. Curve the seam from **D** down beyond the line $1\frac{1}{2}$ inch and back to **B**.

From **B** to **C** is the same as the back and 2 or 3 inches more, then draw from waist to **C** a line curving also over the straight one.

The front is laid down as shown, point **C** being 1 inch from line. From **C** to **D** at bottom draw a straight line.

Measure from **D** over to **E**, 25 inches, and draw a line from **E** to **E**, thence curve over at hip near **H** very strongly for room for the hips.

The diagram is drafted to a shape very nearly proportionate, and would in its length and width be an average, but as the fashion changes suitable changes would be needed, especially in the width of the lower end of the skirt.

The darts are extended down below waist line, tapering to a sufficient length, so that they will give a good shape.

Apply the hip measure, and make the dress 2 inches more, then add on or take off on the side-seams, to accord with it.

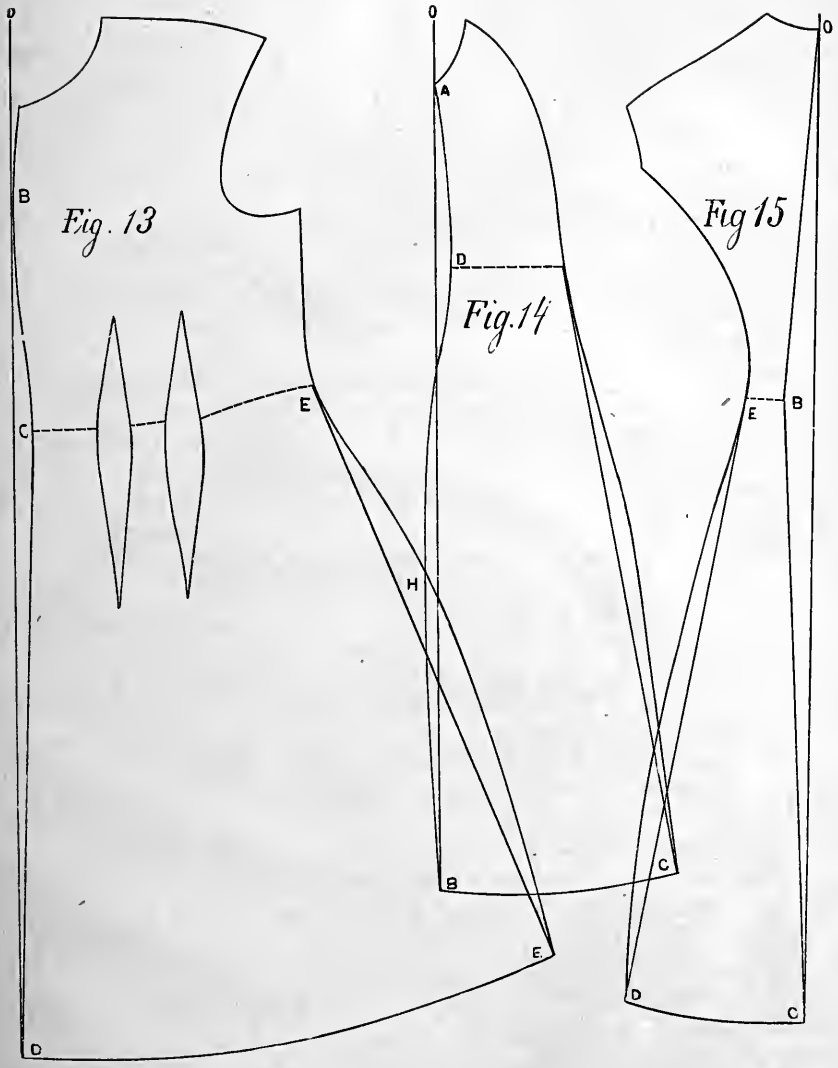


Fig. 13
B
C
E
D
Fig. 14
A
D
H
B
E
Fig 15
E
B
C
D
C

THE SKIRT.

The drafting of skirts for dresses is a subject which has not been so clearly and fully defined in text books, to my mind, as might be. Most all theorists have their own peculiar point of producing a pattern, some of which are quite wanting in a sound basis, either as regards balance or shape.

The much superior way of producing a skirt, in order to attain a perfect balance and correct shape, is, undoubtedly, a mode similar to that used by tailors in cutting the skirts of coats. Such a one, we have always found, would answer every call made upon it, and give a skirt superior in hang and shape, and always ready to be adapted to any style, however changeable.

The diagram Figs. 16 and 17 will give an illustration of the manner in which a skirt is drafted, and the following explanation will be sufficient for a clear understanding of the method:

First draw a line like **O B**. Then lay the pattern of front of waist on the line in such a position that the middle of breast be close to line, as at **A**, and the bottom at waist $\frac{1}{2}$ away from it at **D**, in fact in the same position as when drafted.

Now from shoulder point as pivot, sweep from **R** to front for top line. **R** is the lowest waist point on side. Then lay the square on the front line so that the short arm may run over and touch the curved line near **2**, second dart, then draw along it for upper edge.

Next measure the length of skirt from **E** at square line down to **B** for full length of skirt.

Although the measure is taken at the back, yet we find the variation to be so little that it will answer equally as well for the length in front. Yet some prefer, while measuring, to take the length in front as well, which, of course, gives additional security.

From **X** as pivot sweep **B** to **S** and **P**. The size at bottom is regulated by style. This for a medium size of 36 breast, would be $1\frac{1}{4}$ yard from **B** to **P**.

Some ladies even prefer a skirt so scant as only to measure $2\frac{1}{4}$ yards in the whole circumference, which indeed is rather small.

It is, of course, self evident that stout ladies would in the same ratio need a size of 3 yards or over, as the size of the person is large, or the desire is for a roomy garment.

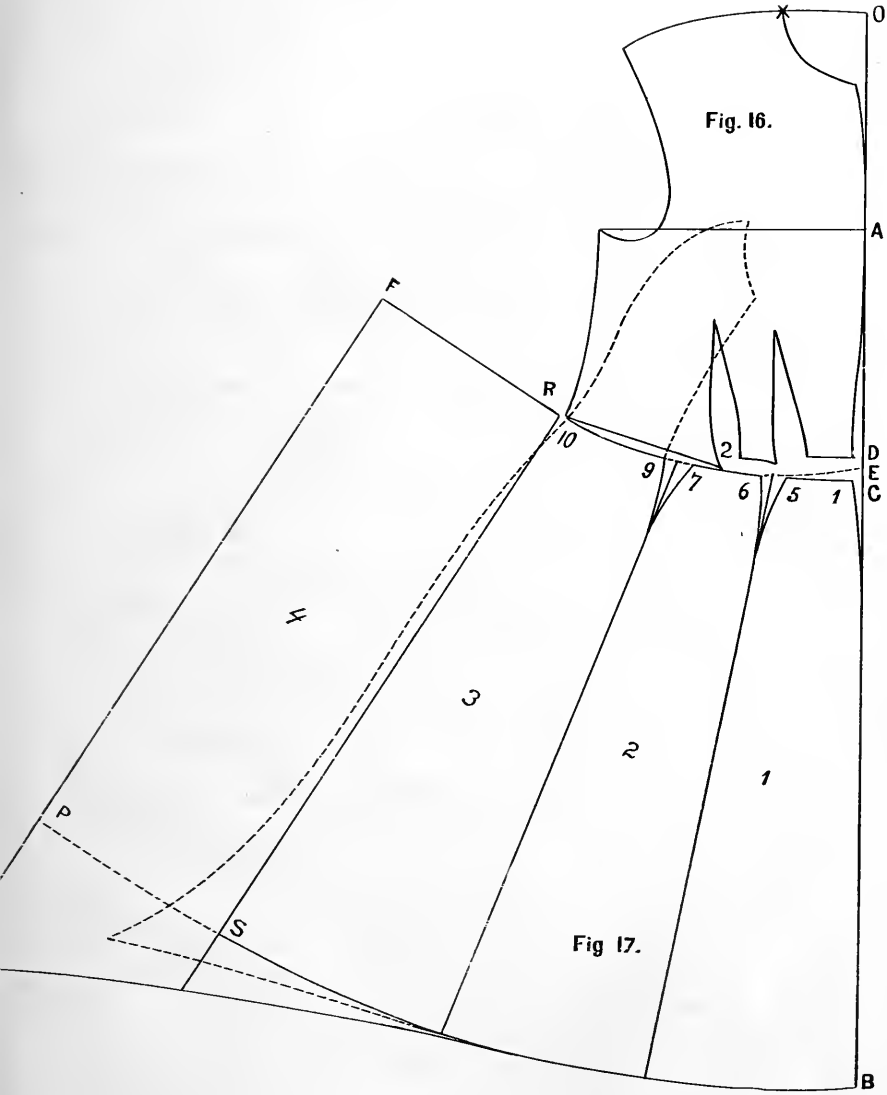


Fig. 16.

Fig 17.

Having placed point **P**, we put a long straight edge on to **P** and lay it in the direction of **F**. While so placed lay the square along upper part of long edge, and move the two together till you form a square line from **P** by **F** to **R** on waist point of front. Then draw along its upper edge from **R** to **F** and also to **P**.

Now measure from **F** to **R**, and place the same distance from **P** to **S**, and draw a line from **S** to **R**, which is for the back breadth.

Divide the distance **S B** into 3 parts for the 3 breadths. Break off at front top at **C** ½ inch and form the curve.

Divide the distance from **R** to **E** also in 3 parts and mark them. Then take out the quantity of darts, whatever they may be, between **5**, **6**, **7**, **9**, and at **10**.

Curve the seams and draw lines from top to bottom to separate the different breadths.

This manner will produce a skirt for a walking dress, and is the base for all skirts, or any garment which reaches below the knee.

For a skirt longer at back, or a train, this method differs only in putting the side-body on the upper seam of skirt in the manner shown by the diagram; then running a line down by the spring, and giving a slight curve, and springing out beyond **S** to the extent of train wanted. In this case it requires to be longer from the second breadth back.

The back is drafted with a straight line. the same as a short skirt, but its length increased from line **S** to conform with it.

SHORT SACK JACKET.

FIG. 19.

In cutting sacks, the first consideration is a good balance, and in order to attain this, there is nor never can be a better guide than the body-pattern to follow. In using this, if it be good, we retain all its good points, and get the same certainty of fit as we would in case of a dress-waist.

We take, for instance, the pattern of the back, lay it on a straight line like fig. 18, so that the upper corner at the neck rests on the line at **D**, and the lower part be, for regular built, 1½ inch away from the line as shown at **C**.

Now trace all along the pattern, following closely the edges. Then from **D** at neck, measure down the length desired, and from 1 to 2 inches above **C** begin to curve gradually out toward the straight line—this should be a continuous curve.

The style of these jackets being close, and for giving a narrower effect, it is well not to make the back too wide; for this reason make the bottom from **B** to **E** 6 inches. From the point at waist 1, draw curved line to **E**.

If the garment is intended to be heavy and used as an over-garment, certain additions are required at top. on back, on shoulder and at sleeve, ¼ inch. From **F** commence adding with ¼ inch, increasing it till at **D** we add 1 inch. From **D** curve the line to **E**.

Draw a line, and place the side-body against it, with point **H** resting on it, and the waist being 1 inch from **B**. (See fig. 20.) In cases where the hips are very large, the the distance from **B** is 1½ inch.

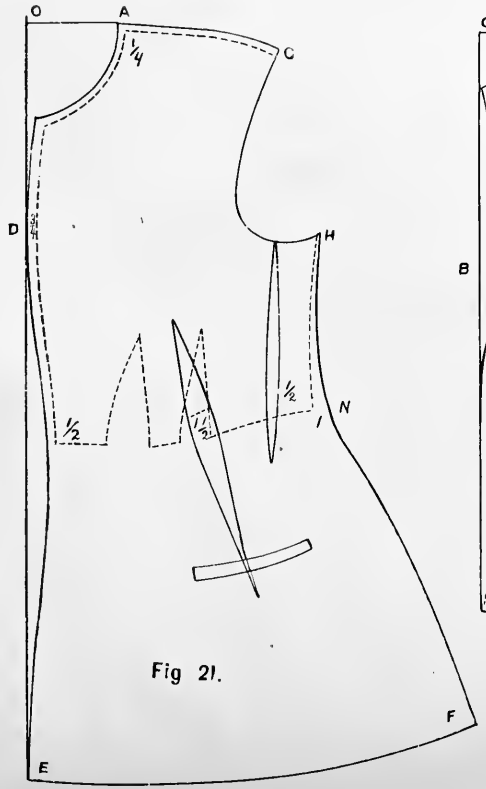
Now trace the side-body, and from **D** at waist, measure the length as produced by the back, then curve the side-line from **D** to **A**.

Having got the right length, fix a point in the centre between **D** and 1 at waist, and from it as pivot sweep from **A** to **N**. From 1 to **N** draw a straight line, then curve over it considerably at hips, in order to have room for them.

Make the bottom of side-body as wide as the back.

When the back is cut 1 inch from **D** at waist, and it is intended as an outside garment, it is always well to take a little of the width of the side, therefore then go in at **D** on the side-body ½ inch, and then curve the side line.

The front (fig 21,) is drawn in the following way. Draw a straight line, like from **D** to **E**. Lay the front pattern against it, when intended for a thin garment, but for a heavy one, let it be ¾ of an inch from it at breast, and 1 inch at waist.



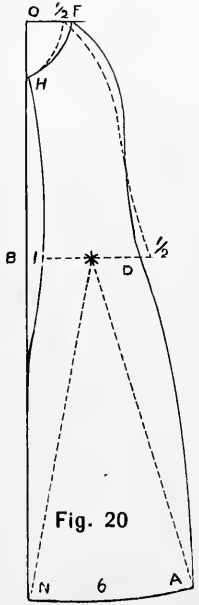


Fig. 20

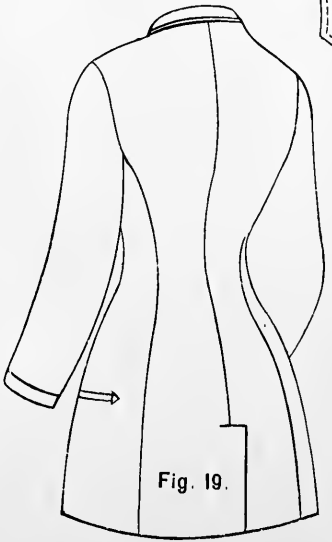


Fig. 19.

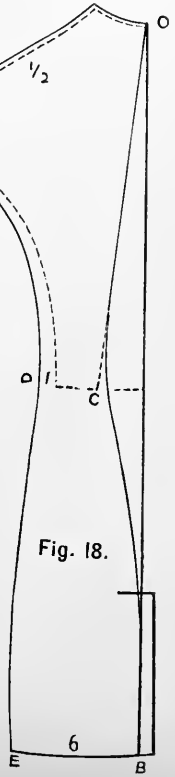


Fig. 18.

Now trace the edges of the pattern. From the waist in front draw a line to bottom at **E**. Place the side body from **H** to **N**, and by it get the length to **F** wherever it may be.

From shoulder point **A** as a pivot, sweep from **F** over to **E**. For an overgarment add on at shoulder $\frac{1}{4}$ inch, the same at neck, one-quarter at **H**, going out at **N** 1 inch.

Now take the measure of the hip; find out how much the back and side-body measure as they are cut, then apply the balance from the front over towards the side. This measure gives the width the sack ought to be, and must be the full measure and 2 inches over for seams and ease. This will give a point below **N**. Then from **N** through this last point draw a line to the bottom at **F**.

Draw in the same darts, or when it is not wanted close one is used, and then it running more forward at top.

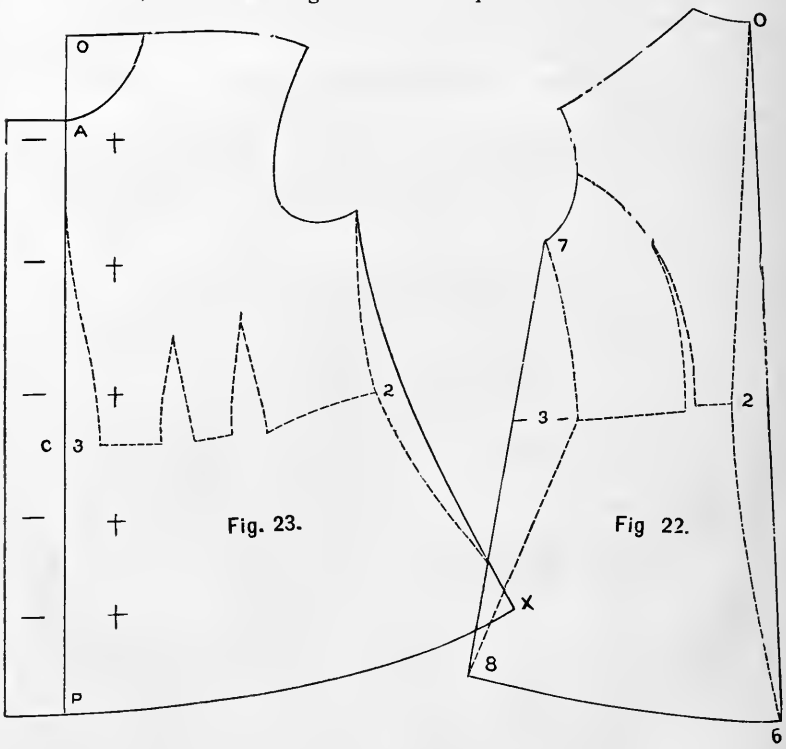
Sometimes also a cut is taken out under the arm of $\frac{1}{2}$ inch size.

LOOSE SACKS.

FIGS. 22 AND 23.

In continuation of our endeavor of giving every style of cut, the diagrams 22 and 23, illustrate the manner of drafting a loose sack, such a garment as is usually worn for a morning jacket, and well adapted also for an out-door garment, when made out of suitable material.

This, like all our designs, is drafted by the body pattern, which is laid on to a line at **0** and 2 inches away from this line at the waist. Next measure down and fix the point where the length is wanted, as at 6. Now from **0** draw along the back to 2, and next with a graceful curve to point 6.



From **O** as a pivot sweep from 6 over to 8. Now lay the side body against the back in a similar position as it occupied when being drafted, and draw along the pattern on top of back, over the shoulder, along the arm to 7.

Make a point from the waist, 3 inches, as shown on the diagram, and then from 7 through 3 draw a line to 8. This gives the back for a loose sack.

Should we want one closer fitting, we adopt the same means, but only make it closer in size at the waist, and after drawing the line from 7 to 8, we also draw one from the lower waist point of the side-body to 8, and cut the pattern out by this last line, which gives one having a close fit at waist, and yet giving enough material to cover the hips and the skirt well.

In drafting the front, take the body-pattern and lay it on the line so that it may touch at **A** on top of the front at neck, and let the waist be 3 inches or $2\frac{1}{2}$ inches away from the line at **C**.

Now trace all along the pattern at neck—over shoulder—along the the arm hole.

For a loose sack we add 2 inches over the body-pattern at 2, lower waist point at side, while for a close sack we draw from 2 to **X**. It is evident point **X** is got by first placing 2 inches at waist, and then drawing the line for the loose garment.

Next apply the back along the front, which locates the length of the side-seam on the front. Then sweep the bottom from the shoulder point as a pivot.

Add the lap in front $1\frac{1}{2}$ inches for single, and $2\frac{1}{2}$ inches for double-breasted.

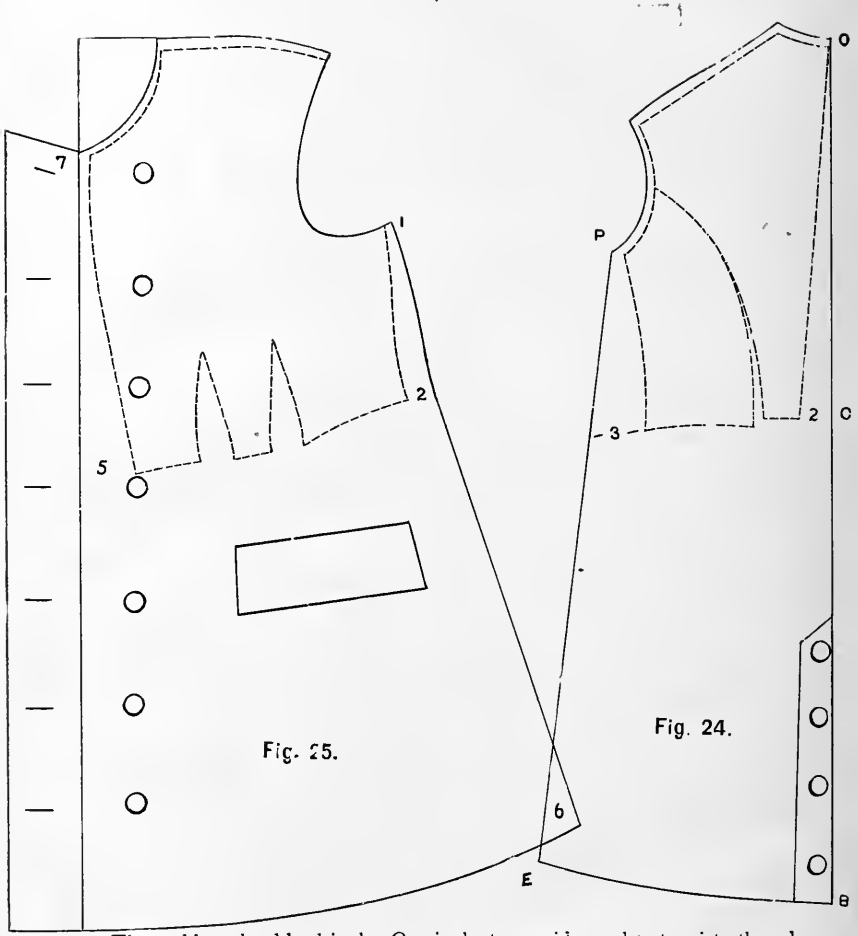
LOOSE OVER-SACK.

FIGS. 24 AND 25.

We here introduce a plate of a Loose Over-sack, which is cut long and suitable for a Water-proof.

The similarity of this with figs. 22 and 23 is so close that it seems hardly necessary to give any added description. Yet we will show where the difference lies. The back is laid away from the line 2 inches at waist, and 3 inches on the side. Over the back and shoulder, also on the arm, there is added, for an over garment of light material, $\frac{1}{4}$ of an inch, and for one of heavy $\frac{1}{2}$ of an inch. From **P**, where it is $\frac{1}{2}$ inch larger, we draw a straight line through 3 inches to bottom.

At front we lay the pattern $\frac{1}{2}$ inch from line at breast, and 4 inches at waist.



Then add on shoulder ½ inch. One inch at 1 on side, and 2 at waist; then draw the line, curving it out below 2, to give a little more cloth to 6. Sweep for bottom for shoulder point. Add on in front for double-breasted beyond the line 3½ inches; for single-breasted 2 inches. Put in a plait at back with buttons. Have buttons close together, and let them run down to the bottom in front.

THE LONG OVER-SACK.

Cut by the Body-Pattern. Figs. 26, 27, 28, and 29.

In cutting a long sack, two points have to be decided: First, what must be added for extra size; and second, how much skirt is needed over hips to set well. Garments made of light, thin material require less size than those of thick heavy goods, and therefore the cutter's judgment is used to decide what additions should be made.

But let us begin to draft. Draw a line like **O B**. Then lay the pattern of back, resting on a line at **O** and 1½ inches from line at **C**. (See fig. 26.) Now trace the back seam, and slightly curve it below **C** down to **B**. From **O** apply length wanted down to bottom, at **B**. From **O** sweep over from **B** to **F**, and make **F** 6 inches from **B**.

The size I give is for narrow skirt, such as are worn now, but can be increased if a broad back is desired.

At **R** add 1 inch over back pattern, which makes back wider and better suitable for this style of garment. At **O E D** add ¼ inch for thin goods, ½ for heavy. Then shape the back as per diagram. At line **O** over the hips both seams are curved a trifle over the straight line.

The addition in width at **E** and **D** on back is calculated for an ordinary proportionate person; but on flat-backed, very erect built, never add any extra width between the shoulders, for an over-garment, for if it is done, it will surely be pushed back by the arm. This is because it requires no more width to cover a flat surface; but on a round back, on the contrary, we must add more because that will take up more.

The Side-Body. Fig. 27.

On a straight line place the side-body, touching at **S**, and one inch from line at bottom **E**. Then draw from **S** along side-body to **I** and **F**, curving over hips. Should the hips be full, make the distance from **E** one and a half inches to **I**.

The side-body point **D** is moved over ¼ inch, and from **D** we draw the blade line coming in ½ inch at bottom **H**. Make bottom **F** to **A** 6 inches.

Apply the back at **D** and find the length; then at centre **H E** sweep for bottom.

The Front. Fig. 28.

On a straight line lay the pattern so that the centre of front rests within ½ inch of line, and bottom **K** 1 inch, then trace along sye **E** to **C**, and from **C** draw the side seam 1 inch outside of **N**.

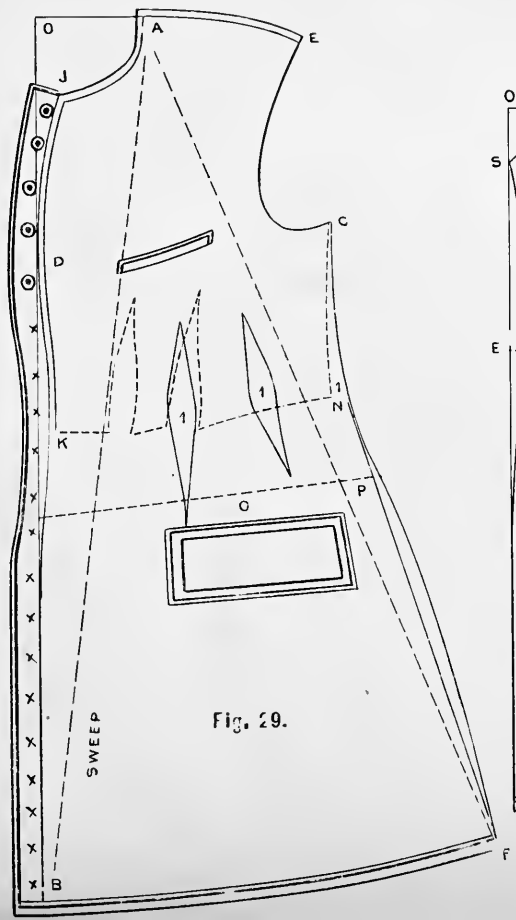


Fig. 29.

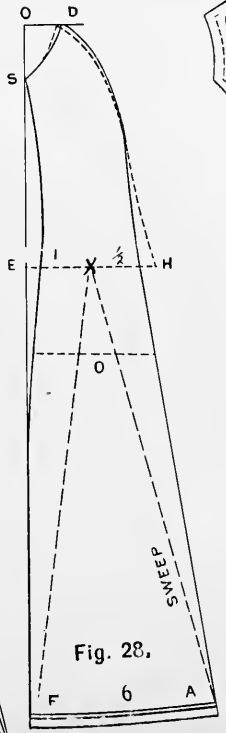


Fig. 28.

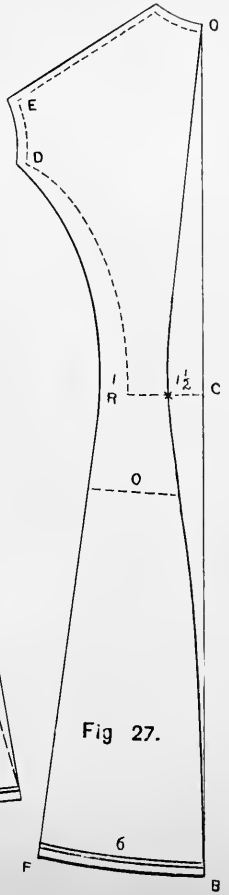


Fig 27.

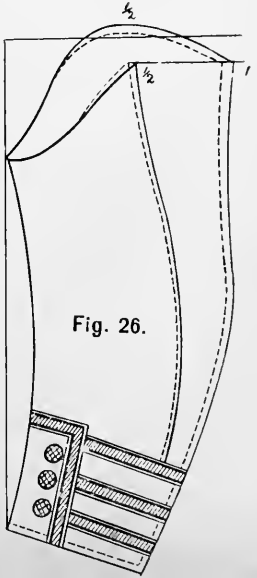


Fig. 26.

Next lay the side-body on **C**, and **N** on **F** to get length. Then measure over hips on the back and side-body as cut, and lay the balance of the measure on front, adding on 2 inches extra, and get point **P**; now from **N** through **P**, draw a line, and curve beyond it $\frac{1}{2}$ inch for the side-seam.

Add on shoulder $\frac{1}{2}$ inch, advance point **A** $\frac{1}{4}$ inch and form gorge to **J**. Sweep from **A** as pivot by **F** for bottom to **B**.

Draw front line **J D K** to **B** $\frac{1}{2}$ over front, and then add for lapel for single or double-breasted, according to the style wanted.

Place darts farther back, (see fig. 3,) and make them $\frac{1}{2}$ inch less in size.

THE SLEEVE. FIG. 29.

The addition on this is 1 inch on back seam, $\frac{1}{2}$ on top and $\frac{1}{2}$ inch on lower sleeve seam, also $\frac{1}{2}$ longer, as shown on diagram.

WALKING JACKET.

FIGS. 30 to 34.

The smart looking jacket of which is given a design as it looks when done, is now much worn, especially by young ladies. It therefore should have a smart appearance, which can be produced by finely shaped lines. With this in view it becomes necessary that the seams in the back should have no sudden round over side-body, but only a gradual curve.

The seam on shoulder must be high up. To produce a good close-fitting skirt, it is necessary that the lower edge or bottom, cling in to the dress, for when it sticks out it detracts from the style and spoils the whole garment.

In order to produce a skirt with these essential qualifications, the top line from **R** to back plait is dropped down 1 inch from sweep. The waist seam is made 1 inch longer, and this extra is shrunk in, giving more room over the hips, and preventing the tendency of gaping behind.

Our diagram gives a double-breasted jacket; this, as is evident, can be changed to a single or to any style of cut-away.

In order to produce the pattern, having all the good qualities of a fit, we take the body-pattern, as cut to any measure. Of this pattern we place the back on a line previously drawn on paper, touching at **C**, and moving **C** at bottom of the waist away from the line $1\frac{1}{2}$ inch. Then curve the back seam a little above **C**, adding over **C** $\frac{1}{4}$ inch, thence running down to **B** at bottom to length wanted.

In measuring for jackets, always take, besides the natural waist length, also an extra length where it would appear best that the seam should be: this is the most prominent part of the hips, and is generally 4 to 5 inches below the waist.

This extra length of waist seam is placed from the waist pattern down from **C** to the hook.

As this is an over garment, we allow $\frac{1}{8}$ to $\frac{1}{4}$ of an inch for making up, as the goods may be of light or heavy material. From **O** on top of back, on shoulder and at arm hole add this amount over waist-pattern. At **F** add a trifle, going down to **D**, which latter point is 1 inch from the pattern, thence with a slight curve to the bottom at **E**. The distance from **B** to **E** is about 5 inches.

Then add also for the plait and hook. Before proceeding further, let us observe that on a flat back the width of back must not be increased at **F**.

Next take the side-body, which place against a straight line, point **H** touching at this line, and the waist point being 1 inch from line at **B**, for all ordinary

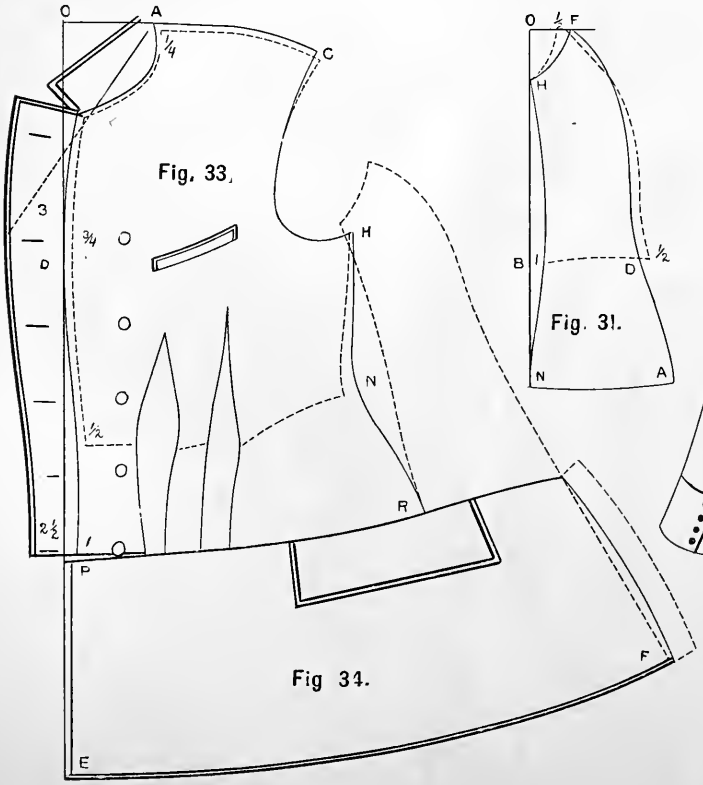


Fig. 33.

Fig. 31.

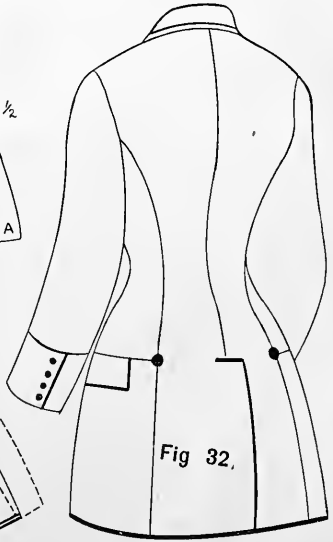
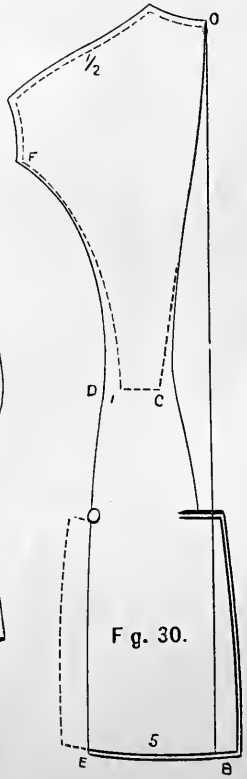


Fig 32.



F g. 30.

Fig 34.

forms. But on all such forms whose increase of hips is more than 10 inches over the waist, we move the waist away from the line at this point 1½ inch. Then draw along the side body from H to 1 and N, touching line at H. The distance down from B to N is regulated by the length on back from D to button.

The top of the side-body point is moved over to F ¼ to ½ inch, then from F draw the seam touching at the full round of the blade, and from thence gradually go inside until we arrive at a point ½ inch inside of lower point of side body at D, and down with a slight outward curve to A. Now apply the length of back and rectify that of the side-body.

THE FOREPART. FIGS. 33 AND 34.

Draw a line O E, and on it lay the front, so that it is within ½ inch of the line at breast, and 1 inch at waist. Then draw the front line outside of the body-pattern, ½ inch; this will give extra width to the jacket, all along from top to bottom. Draw also the neck, adding ¼ inch: then the shoulder, adding ¼ inch to C; thence along the arm-hole to H. At H we add ½ inch, and at N 1 inch.

Draw the darts, extending them downward, by curving below like our diag., giving not too much curve, and leaving the piece between the darts pretty nearly straight. From N to R spring out the line.

Next take the hip measure, and deducting from it the width of the back and side-body, apply it at 1 in front, and measure to R, adding to the measure 2 inches, and moving point R in or out to the size.

Now apply the side-body at H down to R, to get the correct length, and leave it. In a closing position touching at R and up along the seam an inch or two. Then from A, top of shoulder point as pivot, sweep from A on side-body, past R to the front. Lay the square at front line, and touching at first dart, draw the sweep straight from thence forward.

Then add for lapel, making it 2½ inches at waist, 3 inches at breast at top. Also further regulate the front shoulder by the back.

Drop the skirt line from the first dart ½ inch to P.

From R to back plait we change the sweep by curving it downward 1 inch below the sweep. Then place the side-body on this changed line in a closing position on waist seam, and draw the plait line by laying the square on the spring of the side-body and along it draw the plait to the bottom F.

Now measure the length by the back, and sweep the bottom from F to the front by A, the shoulder point.

Finish by curving plait line over straight line ½ inch.

THE CIRCULAR.

FIG. 35.

This garment, although made up in a variety of different styles and shapes, still in all will retain the simple construction, as given in the diagram.

In order to design them, the waist pattern is also used as base to work from. This is laid on a straight line close at **D** and about two inches inside of line at bottom of back, **C**.

Then place the front closing at sleeve head on shoulder **E**, and placed so that a right-angled line from **O** will run along the front to **K**.

For a very large, loose garment, having a great deal of drapery hanging down from the shoulder, we can move the front pattern out more, still letting it touch at **E** closely to back, which of course causes point **P** to come closer to back. Then we will have to draw the front line from **S** front of breast to **K**, leaving always about 1 inch distance from **J**.

For a close-hanging garment, the opposite to this is done, and the pattern is moved the other way; that is, closer towards the centre, which causes point **P** to be farther away from back. The front line then is drawn by the front, and the balance drafted by the same manner one as another. Now trace along the pattern for the top of back, and both shoulders and neck, to **R**.

Then draw a line from back point to **P**, on front shoulder point and dot between the two points in the centre. From this centre make a line to **E**.

Next measure the length desired from **D** on back to **B**, or wherever it may reach to. Then sweep the lower edge from **B** to front at **K** by **F** as pivot. This circle needs straightening both at back and at front, square with front and back line, as shown at **B** and **K**.

From **R** to **S** we retain the curve of front pattern, thence the front is taken along the straight line to bottom.

Whatever size, and whether close or loose-cut circular is drafted, the point **L** is always the pivot for the lower circular edge.

Sometimes it is advisable to cut them with a seam running over shoulder down through the centre to bottom. Then the centre of the back is laid on the fold of the goods, which obviates a seam in back.

These slight modifications can easily be determined without further explanation, and to any practical cutter any variations may at once occur.

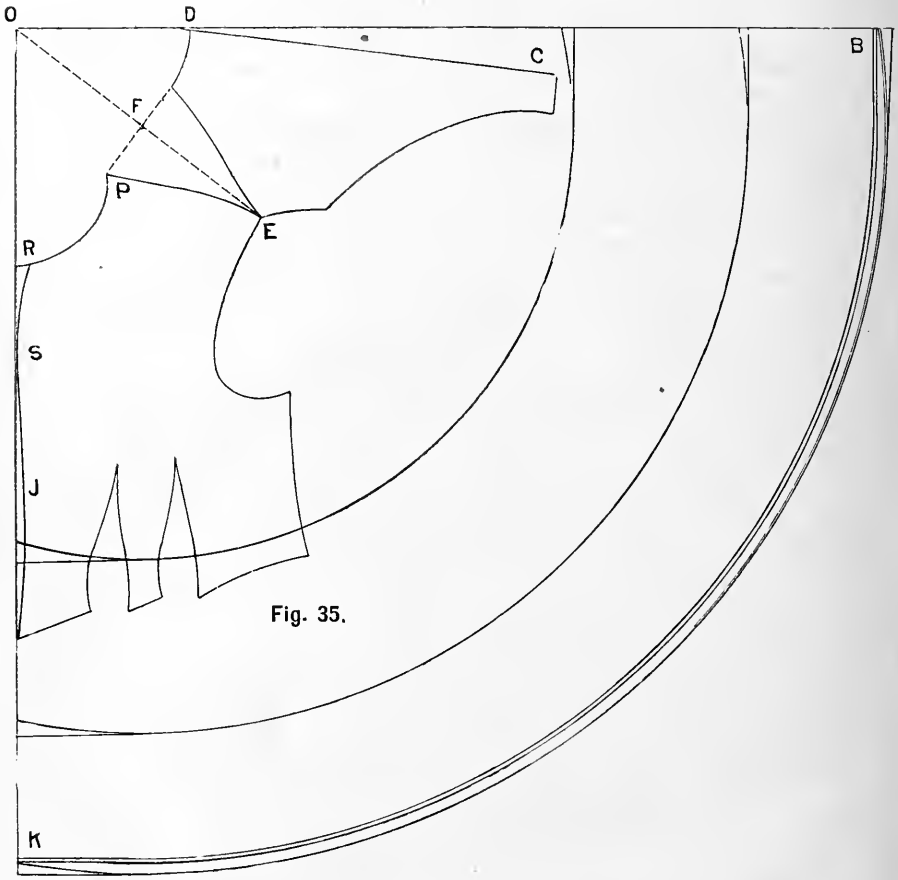


Fig. 35.

TALMAS, OR WRAPS,

FIG. 36,

Are, in general construction, similar to a circular, as regards the shoulders and neck, and also the covering for the back. Therefore a method identical is used in designing them.

The only difference is attributable to the front, where it is cut either with taps coming down low and cut square, or when it is cut the same in shape at front as at the back.

After the pattern has been laid on the line, we follow along it to the waist, and then curve it to line again.

Draft the shoulders and neck, and when it is intended to come to the front, we simply follow that of the waist pattern, and form the lower part in any shape we desire, while the back may retain the shape we have designed on the diagram.

However, when we want one cut in a very close form, and simply hanging down from the shoulder, then the front line deviates so far, that it starts from the shoulder point, and takes the curve of front to waist, thence curving inwards to bottom, similar in shape to our diagram.

It is difficult to give any close rule to adhere to in forming this garment. The only point is the shoulders, which must be produced by the shoulders of the body-pattern; the lower points are as yet only a matter of taste, and must be produced by the judgment, and there are such a variety of different changes, that it would be impossible, in a work of such limits as this, to give more than a general idea.

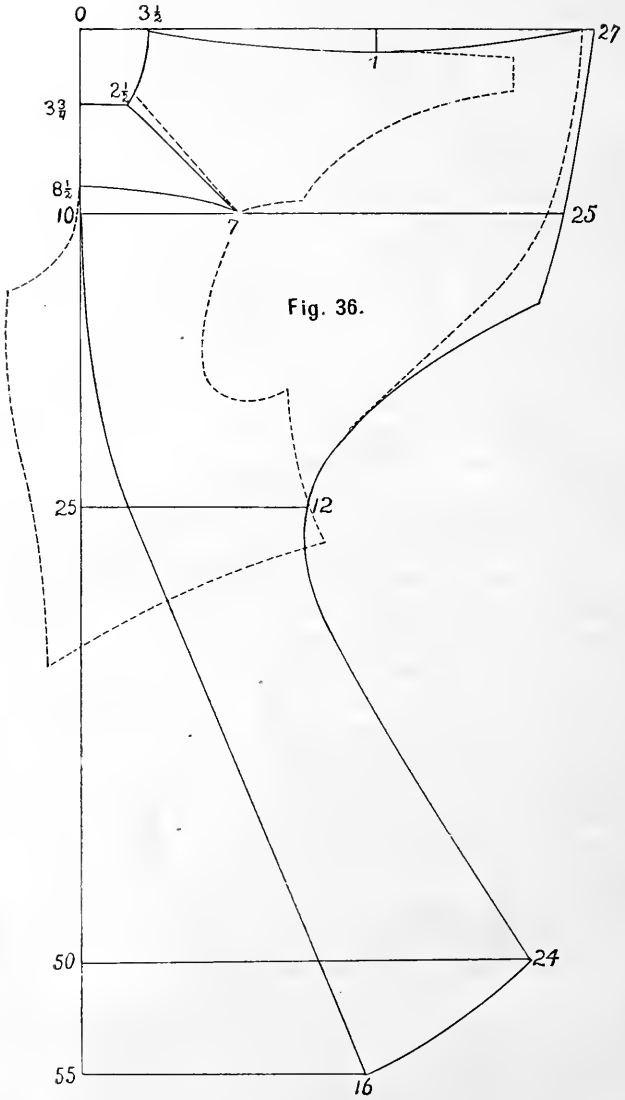


Fig. 36.

THE SLEEVED TALMA.

FIGS. 37 AND 38.

The garment here represented takes on more the nature of the Dolman; but as it is one made generally of light summer goods, and merely a wrap, it may be placed in the same class as Talmas proper. It has, as will be seen, the French back and a circular, loose sleeve.

In order to draft it, we use the body pattern, and we may again state that no manner of drafting gives such a guaranty of fit and ease in working as this.

Lay the back on a straight line touching at **O**, and 1 inch from **O**. Then draw along the pattern from **O** to 1. Apply the length wanted to **C**. From 1 to **C** draw a straight line.

Also draw along top of back and shoulder. Then make the back at **O** as wide as the style should make it, say 3 inches. Then at **C** to **F** place 5 inches. Now from **B** draw a nice curved line to **E** and **F**.

Next place your sleeve pattern in such position, notch of sleeve on the back notch, and when a wide sleeve is wanted swing the lower part of the sleeve farther out from back, and when a close sleeve is desired, nearer to back. An ordinary distance is when it is in such a position that from **S** to back at 1 it may measure 24 inches. Having placed the sleeve as wanted, draw from **B** along the top of the sleeve, making it a little scanter than sleeve-head at front, and curving down along front seam to **S**.

Now from shoulder point of back in front of **O** as pivot, sweep from **S**; or if it is wanted that the sleeve should come down to the bottom of back, then sweep from **F**, when it probably will come to **S O**. Then draft the shape of bottom as may be desired, but be sure not to make the front any longer than pattern sleeve at **S**. This will produce the sleeve and the back in one piece. Should it be desired to have the French back, then draw from **B** towards **E**, and at **E** take out a space of 1 inch, thence to nothing at **F**.

It should always be borne in mind, whatever the style, be sure and not retain the full round of sleeve head, but, on the contrary, take off the round in front, only retaining the hight, which is essential, otherwise it would pull down on the shoulder.

Turning now to the front, lay the front pattern of waist model against a line previously drawn on the paper, and let it touch on the middle of the breast, as at **O**, and be 1½ inch away from line at waist **H**.

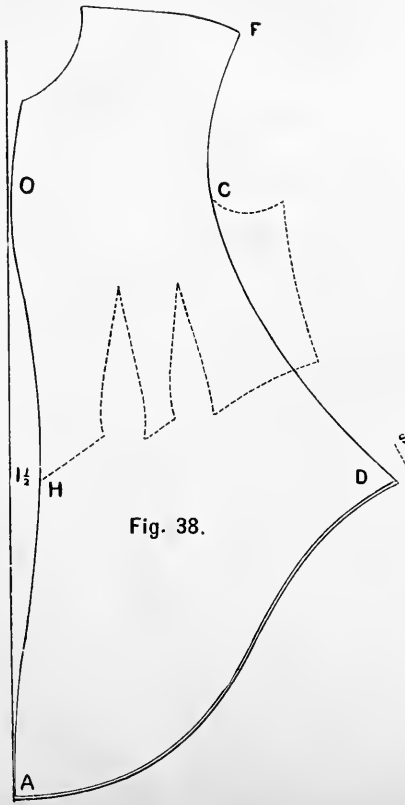


Fig. 38.

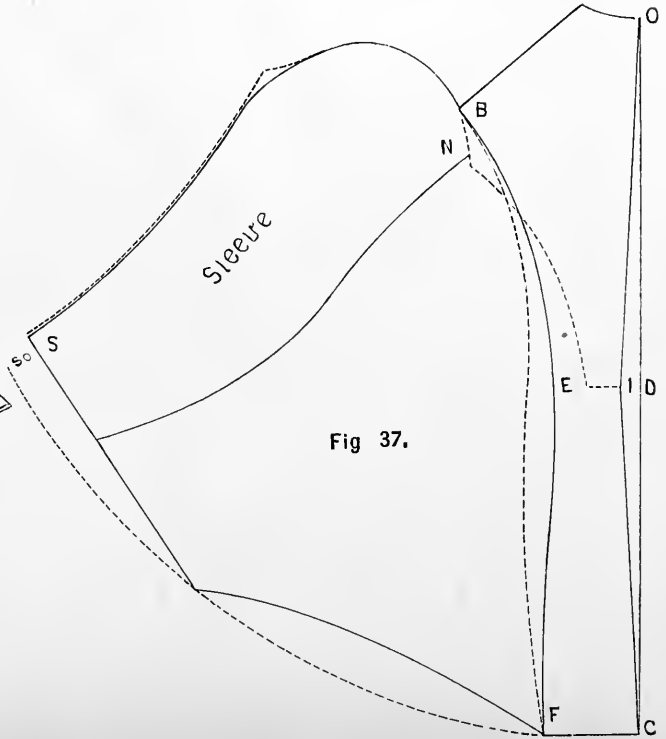


Fig 37.

Now trace along the pattern, retaining the same front, neck, shoulder and arm-hole seams. Now lay the sleeve on the back, (we mean the loose sleeve just drafted,) so that the exact point where the front arm seam comes, which ought to be notched, will rest on **C**. This is found by measuring the sleeve head. We allow for fullness of top 1 inch. Now supposing this sleeve head measured 8 inches, we would measure off from **F** on front shoulder to **C**, 7 inches; leaving the 1 inch to be worked in on top of the sleeve. Make a dot on **C**, place the sleeve on **C**, notch on dot, and swing the bottom out to **D**. This will be easily determined if nearly far enough, for a curved line drawn along the side seam of forepart, from under the arm to waist, and thence sprung out, as is customary for hips, will bring it about right.

Then mark the length by the length of sleeve, for where the lower part at **S** comes to is found point **D**.

Now curve your bottom line of front to suit any shape desired. The front is made in many different ways—it may be cut perfectly circular; or longer at **A**; or again straight across from **D** towards the front, about half-way, and then making a square-shape piece of point **A**.

THE SURTOUT.

PLATE 39.

THE BACK. FIG. 1.

Take the waist pattern and lay it on a straight edge at **O**, and $1\frac{1}{2}$ inch in from line at bottom of back. (See fig. 1.) Draw the back line along back to $1\frac{1}{2}$, thence down to **O**. Now measure from **O** to **O**, the extended waist, and to **E** full length. Draw from **O** to **E** a straight line, leaving 1 inch for tack at **O**.

Next add over pattern at top $\frac{1}{4}$ inch, on shoulder $\frac{1}{2}$ inch, at scye $\frac{1}{4}$ for flat back, for round $\frac{1}{2}$ inch.

At bottom we make the back wider by adding $1\frac{1}{2}$ inch at **A**, and from **A** to **F** draw a straight line, then curve it at **R** $\frac{1}{2}$ inch over straight line.

From **E** to **F** make the back skirt 5 inches.

THE SIDE-BODY. FIG. 2.

Draw a straight line and lay **C** of the side-body on it at top, and 1 inch away from it at waist. Then draw the outlines. Then from **C** draw the side seam along side-body, but $\frac{1}{2}$ inch outside from it at 1, thence curving to **F**.

From **P** run along the side-body, and curve it $\frac{1}{2}$ inch inside at natural waist, and curving out for spring to **E**. Finish the line at bottom from **E** to **F**.

THE FRONT. FIG. 3.

First draw a straight line like **O** and **B**. Then lay the pattern so that the upper part of breast lay within $\frac{1}{2}$ inch of it, and 1 inch away at **S**. Now draw the front line of breast from top $\frac{1}{2}$ from and larger than waist pattern, to **C** and **O**.

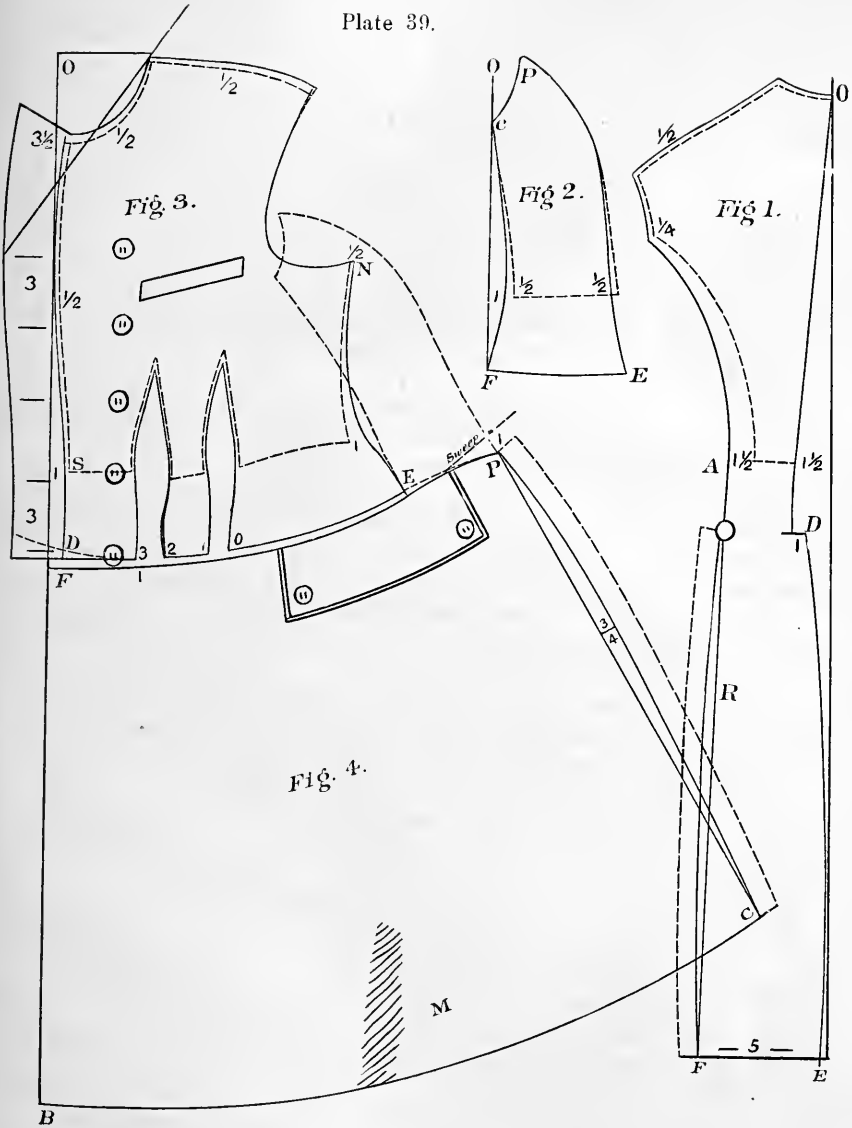
Also draw the shoulder, making it $\frac{1}{2}$ over pattern, and also add $\frac{1}{4}$ at shoulder point, and $\frac{1}{2}$ along at neck near lapel. Draw the scye; at **N** add $\frac{1}{2}$ inch, to 1 inch for ease at waist 1; thence curving out to **E**.

Make the darts the same size, adding only seams.

Now lay side seam of side-body on to front to get the length at **E**. Having the length, sweep from **E** to **O** at front, making shoulder-point the pivot, then let the front be square with front line from first dart to **O**.

Extend the darts down to bottom of front, giving each seam a slight curve, as shown in the diagram to give it shape. Now last apply the hip measure to see if the size is correct; should the draft be too small add on at **E** more round, and on side body at **F** also.

Plate 39.



Never spring point **E** on side-body much, as ladies' garments do not bear it at that point. Some ladies are full in front, especially those who are stout built; such would need more round added on the darts at **O** and 1, 2 and 3.

For single-breasted add over front line $1\frac{1}{2}$ to 2 inches. Double-breasted add on 3 at breast, $2\frac{1}{2}$ at waist 3 inches at lapel for lap.

THE SKIRT. FIG. 4.

Extend the front line down to **F** and **B**. Lay the front pattern as produced by the foregoing, in such a position as shown in the diagram.

Now first sweep from point **E** to **F**. This sweep will run above **F**; straighten this by laying the square on front line at **F** and touching sweep at first dart.

As the skirts by this style are made just scant enough to cover the dress, without surplus fullness, we must curve the upper seam more downwards from **E** to **P**, instead of following the sweep. By following and making the upper seam of the shape of sweep, our skirt would be apt, when done, to hang in a fold at bottom at **M**, which it ought never to do. Therefore point **P** is lowered below the sweep $\frac{3}{4}$ to 1 inch as shown. Also add on above the sweep a curve of $\frac{1}{2}$ inch between points **E** and **O** just above the flap, which gives a better shape.

Now lay the side-body on this line, and with the straight edge placed along the spring of side-body, draw the line from **P** to **C**, then curve out over this line for the plait, $\frac{3}{4}$ of inch.

Apply the length of back to get the length of skirt. Then sweep for the bottom from the shoulder point, which finishes the surtout.

The sleeve is enlarged like all for over-garments.

THE SLEEVE.

FIGS. 40 AND 41.

Every one knows that the sleeve facilitates or hinders the movement of the arm; but many are not aware that it may be the cause of a general derangement of the "*waist*," when badly cut or put in the arm-hole.

To produce all the good qualities required in a perfect sleeve, carefulness must be used while cutting it, that it be based on the form of the arm-hole, and in harmony with the position of the form.

The "conditions of a perfect sleeve" are, 1st, that it must be just the length of the measure taken, to the wrist, where the wearer prefers it, a thing impossible by any other way of measuring than ours; 2d, when the arm hangs natural, it must touch in front at the cuff at wrist, and any extra width produced by fashion must be added, and should hang back; 3d, the top of the sleeve requires to be of a size proportionate to that of the arm-hole, to enable the wearer to raise her arm horrizontal without too great a strain upwards on the waist, and thus causing a drag; 4th, when the arm is at rest, the top should curve around like a cylinder, and not lay flat—this can be produced by a judicious distribution of the fullness.

The curved line that forms the top of the sleeve is not the result of a capricious inspiration, but an operation based on geometrical principles. For an explicit and comprehensive demonstration of the theory on which sleeves are designed, and the particular shape inherent to them, would require more space than is at our disposal and belongs to a more elaborate work; yet our explanations will give a sufficient guide for all practical purposes.

THE MANNER OF DRAFTING SLEEVES.

We can see by looking on the diagram, fig. 40, that the sleeve is bounded in front and back by the perpendicular lines, which on all proportionate shapes are apart one-half of the scye. And that from the line under the arm, which is the breast-line, to the line at top, **R**, is one-fourth.

This square we adopt as a guide in drafting the sleeve. We first draw line **O** 16, and square at top line **O B**. Now from **O** we go down one-fourth of arm-hole, which is for a 16 scye 4 inches to point 4.

Now divide this distance into 4 parts, which will make them apart 1 inch, and draw lines across at every point. Next, from **O** to **B** is $\frac{1}{2}$ of scye, or in this case 8 inches. Now draw a line from 4 to **B**, and make point **C** in the middle from the two points. From thence draw a short straight line to **H**, square with line 4 **B**. **H** is from **C** one-third of the scye, or $2\frac{3}{4}$ inches.

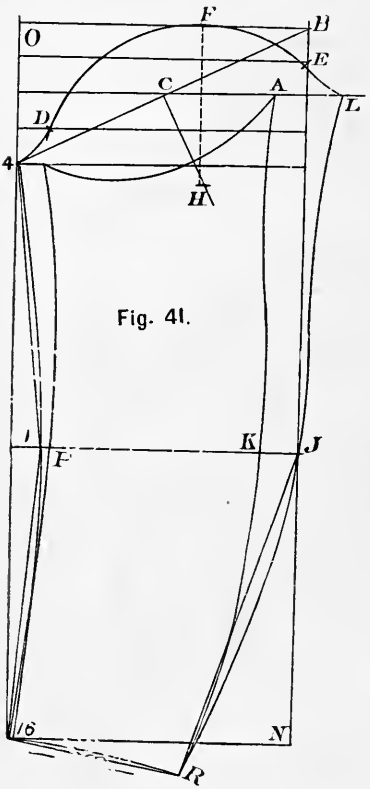


Fig. 41.

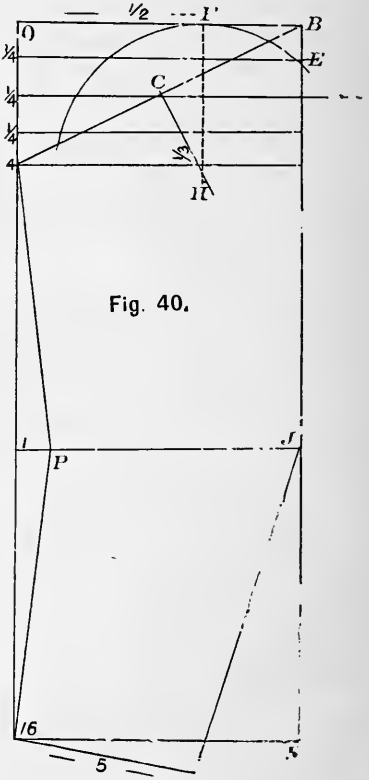


Fig. 40.

Now take the tape, and **H** as pivot, sweep the top curve from **F** each way. **F** is just above **H** in a perpendicular line.

Now from 4 measure length of arm (16) to point 16. At half the distance

make line 1–J, and dot in at 1 one inch to form the front lines by. Also draw back lines from **B** down to **N** parallel with front. Square with line **P** 16 draw line for bottom and make width to style (5 inches.)

Now turn to diagram 41; finish top curve from **D** to 4 and **E** to **L** which must be on line **A L**, in a slight curve. Curve the front and back seams like diagram.

From **D** straight down draw a line to **P** for lower sleeve, and curve it so that it will be $\frac{1}{2}$ inch inside of top sleeve at **P** coming to 16.

The distance gone out from **E** to **L** is placed inside from **E** to **A** to get point **A**. Now draw undersleeve from **A** to front near 4, dropping $\frac{1}{4}$ below line.

Draw from **A** down a line perpendicular to **K**, thence to **R**.

The sleeve must be close as that is the prevailing style, and should be curved in some below **L** and **A**.

Point **E** sews in on back notch, and point **D** at front, they being half of the sleeve, with some added for fullness at top.

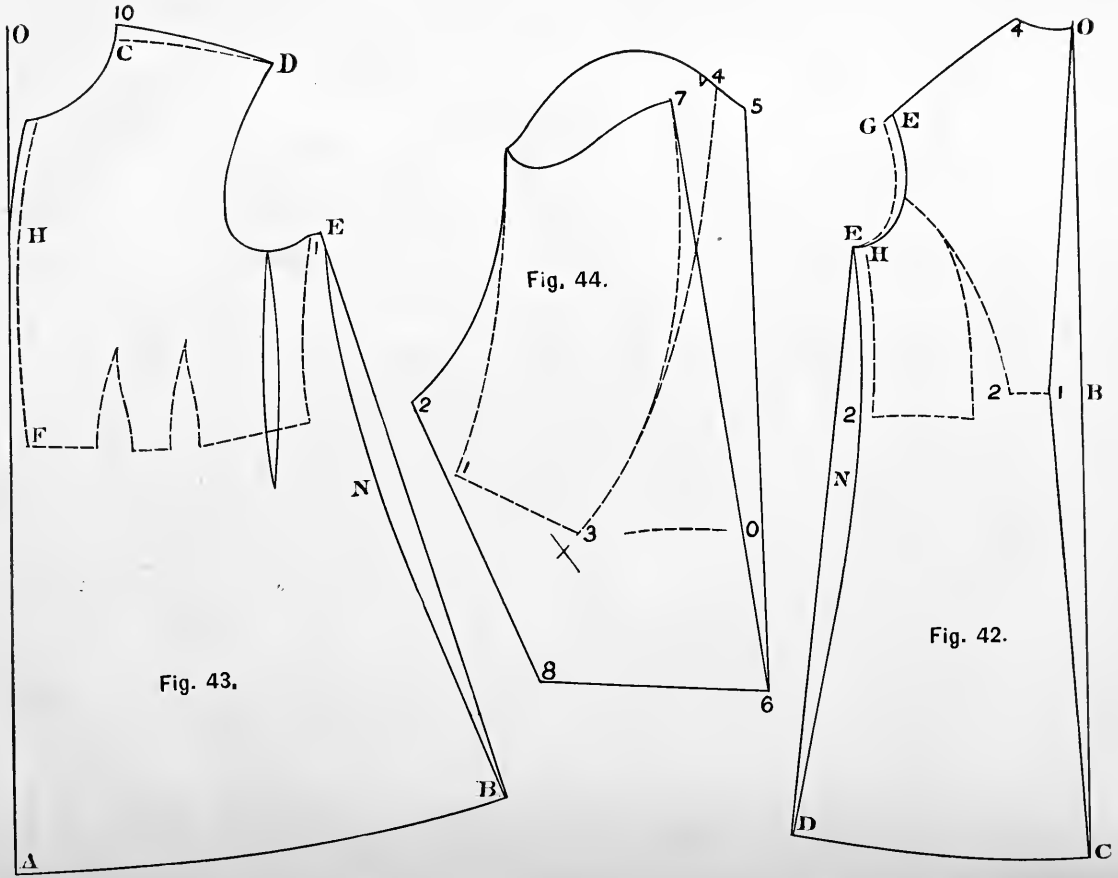

O
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Fig. 43.
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Fig. 44.
4
O
G
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E
H
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Fig. 42.

THE DOLMAN.

Of all the garments which are usually made by tailors, the one presenting the greatest difficulties, both to the cutter and the maker, is undoubtedly the "Dolman." That is to say, when it should fit well and be well made.

The difficulties are associated with special features, which may almost be said to belong entirely to this garment. To begin with, the dolman is a loose wrap, and yet it should give the form of the body, and while a piece of tape is placed inside at back, in order to tie around the waist, and hold it close to the body, yet it must have such a form in the back, as will retain the peculiar cut, more striking in this than any other garment.

The shoulder, in order to place the sleeve seam in the proper place, high up, must be cut narrow, which counteracts the tendency of the sloping form of shoulder, so liable to occur more on this than any other outside garment.

The sleeve should have just the right proportion of fullness, so that it may hang gracefully without drawing. The front should also be narrow, so that the swing of sleeve be forward, and althongh the leading features must take on more or less the same form in each garment, yet there is, perhaps, none with greater variety of style in the various details as round and sqnare sleeve.

In order to overcome the several difficulties in designing this, let us, first of all, take up the original "Dolman," which is a loose sack form, with a flowing sleeve. By commencing with this, we will acquire the principle more readily, and thus be better able to design intelligently any other style.

As will be seen on diag. 42, the back is laid on a line at **O**, and 1 inch from it at **B**. From **O** to **C** place the back length as wanted. Now lay the side-body against the back, close at top, and about 2 inches from it at waist, point 2.

From 1 opposite **B** to **C** draw a straight line, and trace along the back pattern from **O** to 4 and **F**. **F** is $\frac{1}{2}$ inch inside of pattern at point **G**, making the shoulder narrower. Draw from **F** around arm-hole to **H**. From **H** side-body point of pattern to **E** is 1 inch. From lower side point at 2 place outwards 2 inches.

Now from **E** through dot at 2 draw a straight line, which will reach to **O**. From 4 as pivot, sweep lower line from **C** to **D**.

We now take the forepart, diag. 43, and lay it within $\frac{1}{2}$ inch of line at **H**, centre of breast, and $1\frac{1}{2}$ inch away from it at **F**. While in this position trace along the edges of the pattern, so that it will be marked out on the paper. Then

from **C** up to 10 add 1 inch, and draw the shoulder from 10 to nothing at **D**. Draw ½ inch outside of **H** to top of front, leaving the straight line from **H** downwards, the front line of dolman.

On the side add 1 inch at **E**. Now place the hip measure from the front to **N**, on side, deducting the width of back, but adding 3 inches more for ease and fix point **N**. From **E** through **N** draw a straight line, which gives point **B**.

Apply the back at **E** to get the length. Then from **C** shoulder point as pivot sweep from **B** to **A** the bottom line. Also apply the back on shoulder, and regulate by it the front shoulder at **D**.

When a closer garment is wanted, having more shape at side, then the side-seams of the back and the front are curved inward about 1 inch each, and a cut is put in also under the arm, which suppresses the extra fullness above the hips. When the pattern is drafted, the arm-hole is also pared out about ½ inch lower.

On diag. 44 a line is drawn and the sleeve laid down 1½ inch from 5, and 5 inches from **O**. Then trace along the round top of sleeve. When the shoulder has been made narrower, add over the top of sleeve the same amount taken off shoulder.

The front of sleeve seam is curved out from the pattern at point 1 3 inches. This is done, that it may not wrinkle much at inside of arm-seam, when the arms are crooked up or while being carried in a muff. This peculiarity of dolmans, the crooked sleeve, should be carefully looked at, for only in this way can a good sleeve be produced, one that will hang smooth when arm is bent.

Form the lower part of sleeve in any desired shape. To get the correct length stick a pin at centre of sleeve near elbow, and move the bottom of pattern forward to 2. Then make point 2 the same length as the sleeve pattern. This sleeve is sewed in like any other.

Let us now turn to fig. 45. This diagram shows the sleeve attached to the back, and giving a step further in the construction of dolmans.

When the back has been drafted as by our previous explanations, then lay the pattern of the sleeve against it, so that the notch on it will be on the notch of the back, and place a pin at notch to hold it in place. Then swing it forward, or back as it should be to produce the right quantity of fullness wanted.

It will give a loose sleeve when it lays in such a position that the back seam is close to 8, and any distance farther away from point 8, will give a larger fullness.

A close sleeve will be produced when it is swung back so far that the seam

overlaps 8 more or less. The farthest point of closeness would be when it covers point 8 one inch. Whatever size is desired, the subsequent drafting is the same.

Now trace along the top from **H** to **F**, and down to the middle of forearm seams. Remove the pin at notch without disturbing the position of the sleeve, and stick it at the centre, point **A**, opposite the elbow, then swing the sleeve forward toward 5 so far that it gives the shape of the arm, crooked as it is when held up in a muff.

Now mark the front seam from **H** to 5, and fix the length of the sleeve-pattern at 5. Then by the shoulder point of back, sweep from 5 to the back at **I**, or make the lower part of the sleeve any shape called for.

The front, fig. 46, is produced the same as diag. 43. It shows further how the sleeve is put in, the front point 1 is sewed in at **J**, which latter is the front of one-half of the armhole. It will thus give the regular amount of fullness to be laid over the sleeve-head.

The lower sleeve is cut by the upper, along the front from 1 to 4, and along the armhole from 1 to 6 to within 3 inches of **N**, and this is sewed in like any other sleeve. Then cut it from 6 down to 5, and curve over from 5 to 4.

Of course it is evident the line from 6 to 5 remain loose, which gives play to the movement of the arms.

We now come to fig. 47 for a further illustration. This figure being drafted by the explanations thus far given, and the sleeve being designed, we now will draft the French back. This is done by starting from **F**, curving a line to blade, thence to 2 at waist, which is about 2 inches from the back pattern, and making the whole width 4 to 5 inches. From 2 we curve outward toward **Q** and **I** at bottom. The distance between **C** and **I** is made 5 or 6 inches.

Then, again, start at blade, and begin to separate from the line just drawn, till at waist we have 1½ inch space, then come back gradually to line again at **Q**.

This taking out such a cut, gives the back a closer shaper Notch point **G** where it goes on to **F**. Curve upper part of sleeve from **G** to 6 and **J**, above the sleeve pattern to match the narrower back, and begin to flatten it at 6, going inside of pattern fully 1 inch at **J**, where a dot is made. Thence go down 2 inches from **J**, and dot also. From 2 draw to inside elbow, and front of sleeve at **L**. On this diagram point **L** is represented too low down, (a fault of the engraver). It should, to give the correct shape, be 2 inches above where it is drawn.

The front being drafted by the same process as diag. 43, we will now change

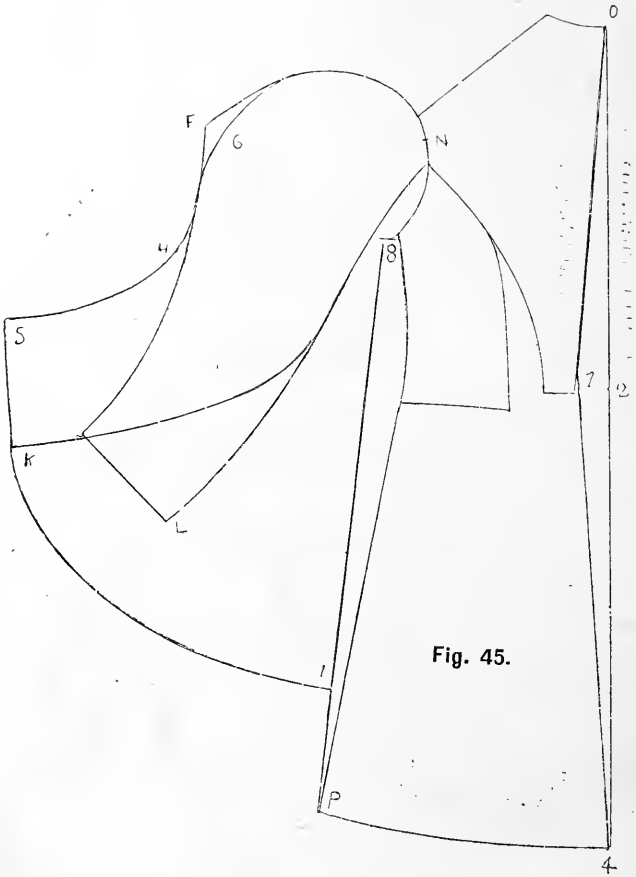


Fig. 45.

it to a different style, in harmony with the back and sleeve of fig. 47, by first drawing the curved line from **D** which is made as narrow as shoulder to fit the back, to **S**. Point **S** is the front notch where sleeve is sewed in. From **S** draft down to **K** and **V**; or we can make yet a larger opening for the armhole, and draw it from **K** to **R** and **Q**.

When the back is cut from **Q** to **I**, it is clear the extra width cut away, which is the piece **R**, **D**, **Q** and **I**, it must be added to the front, where it is represented by the letters **R**, **D**, **B**, **Q**. This is then cut in one piece with the front, when the goods is wide enough, but in cutting a large or long garment the material will be found too narrow, when it is better that the piece be cut from **R** to **B**, making a straight seam, in preference to adding a three-cornered wheelpiece at bottom.

Before cutting the pattern by the last lines drawn, let us retain the piece at **S**, **E** and **V**, till the under sleeve has been drafted. This is best done by laying the front against the back closing at **P** (see fig. 49,) and at bottom **N**. Put a weight on it to hold it in place.

Now, for a close fit over the dress, the piece taken off the back and added to the front, will be found too large, just the amount between the curve at **X**, **X**, which then is taken off at **O**, **E**, and a line drawn from **O** to bottom.

To produce the lower sleeve, draft it out on the upper sleeve, then it can afterwards be traced out on another paper. The first thing is to raise the upper sleeve above the front pattern, in order to handle it better, then take hold of it at lower point 6, and move it towards the back, by folding it upwards till point **H** of the sleeve be resting at **A** of forepart, then **C** will touch **D**, which must be marked. While it is in this position 5 will touch **F**. Draw along from **A** to **F**, which gives line for under sleeve from **C** to 5. Then curve over from 5 to 4 for lower edge.

In sewing it in the armhole, point **H** goes on to **A**, point **C** to **D** and the under sleeve from **C** to 5 is sewed on from **D** to **F**. Point **O** is sewed on to **E**, and the opening left from **F** to **O** is taped.

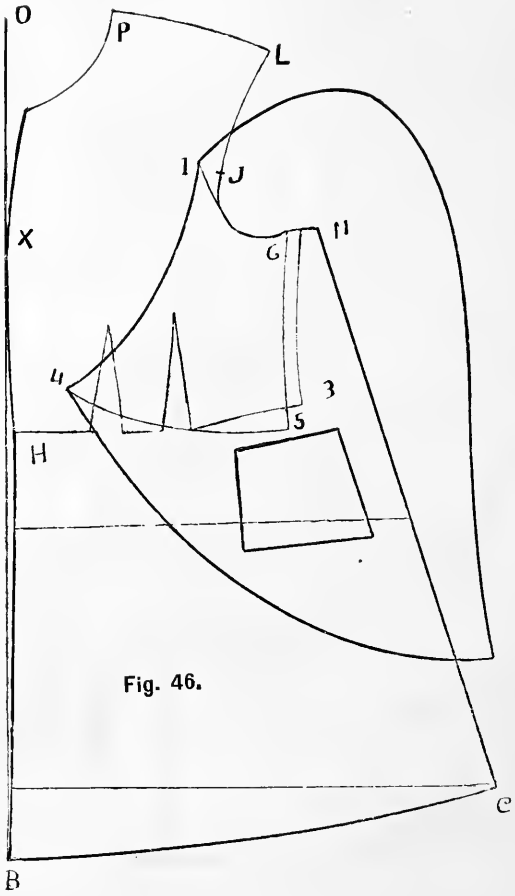


Fig. 46.

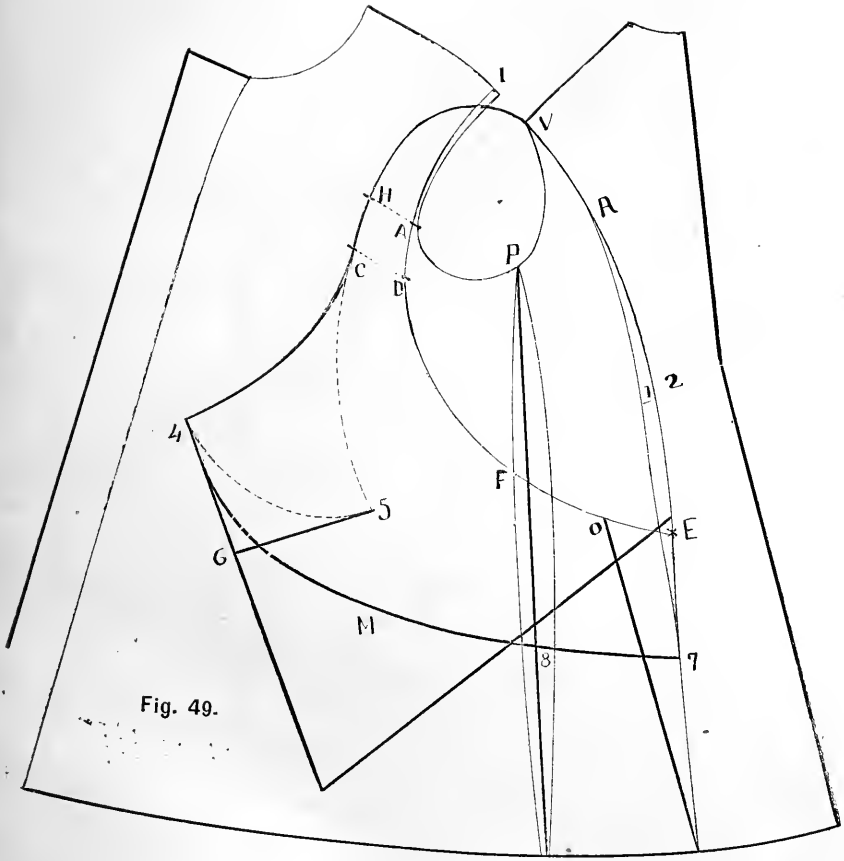
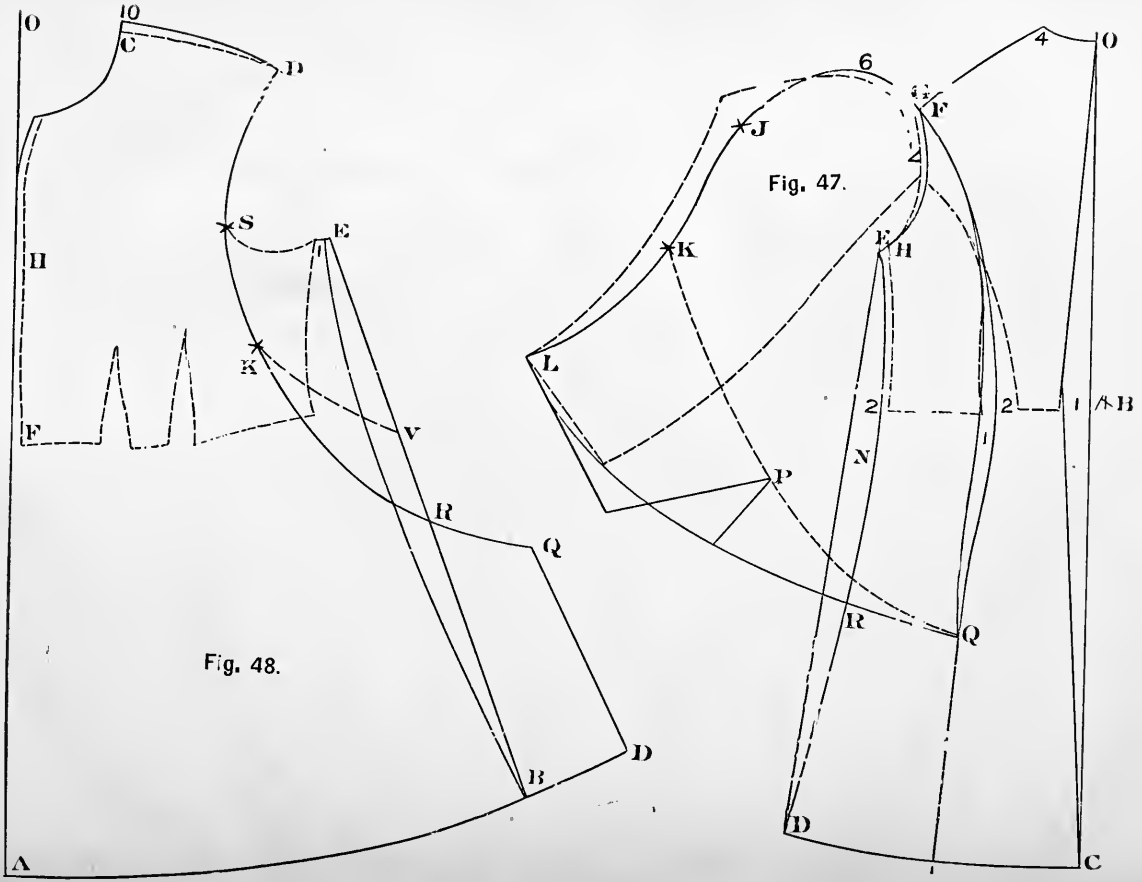
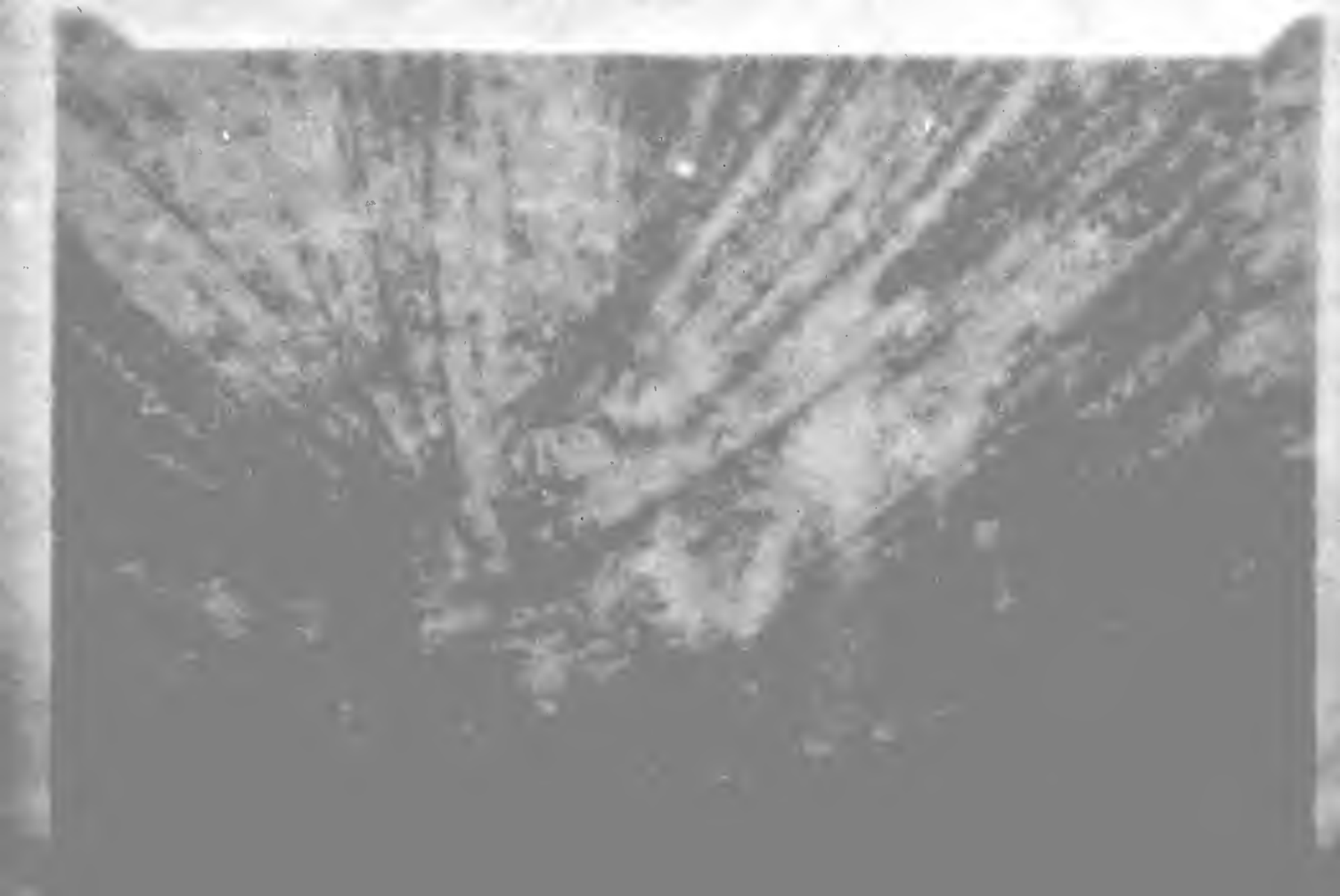


Fig. 49.


O
10
C
D
S
E
H
K
F
V
R
Q
B
D
A
Fig. 48.
6
J
Fig. 47.
K
L
P
N
R
Q
D
4
O
F
H
2
2
1
AB
C



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